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The Antiseptic

A Monthly Medical Journal

Edited by
Dr. U. Rama Rau & U. Krishna Rau, M.B., B.S.

CONTENTS.

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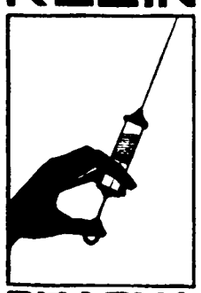

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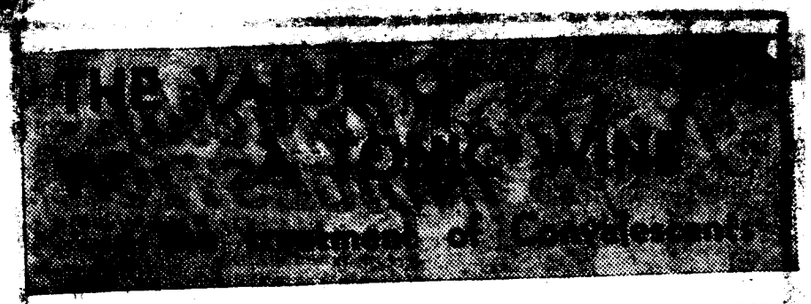

FINDINGS OF THE MEDICAL RESEARCH COUNCIL

INTERESTING light is thrown on the proper treatment of convalescents by the report of the Medical Research Council, "ALCOHOL: ITS ACTION ON THE HUMAN ORGANISM". During convalescence (particularly after Influenza) the patient frequently suffers from restlessness and morbid anxiety, that inhibit appetite and retard recovery. The report suggests that at this stage there is a two-fold benefit in the use of an alcoholic restorative. The "special value" of such restoratives lies in their combined effect of controlling the patient's restlessness and anxiety and improving his appetite, *while at the same time being foods of considerable thermal-energy value.*

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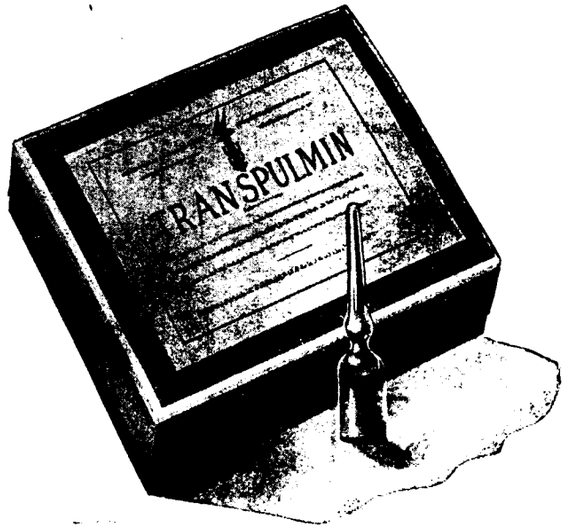

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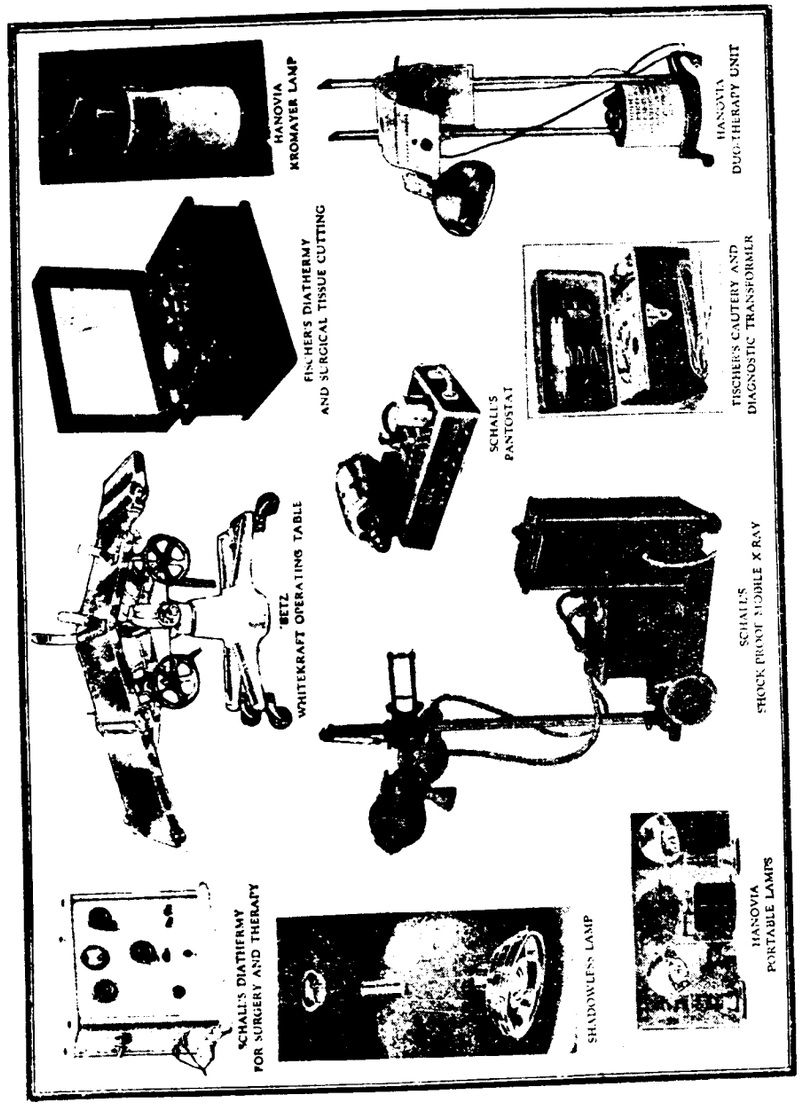

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Original Articles

RADIO THERAPY IN GLANDULAR DISEASES*

BY

Dr. P. M. MEHTA, M.D., M.S., F.C.P.S.,
Chief Medical Officer, Nawanagar State.

THE high hopes held out by the pioneers of Surgery in the field of glandular tuberculosis have not been realised. It was at one time thought that by removing the affected glands by means of knife, the disease would be radically cured. The proud name 'radical method', which they gave to this mode of treatment as opposed to the older methods which were disparagingly referred to as 'conservative methods,' indicates the sure faith which inspired the first workers in the field. Their enthusiasm led to extensive and heroic operations. The expected results, however, did not come off and it was slowly realised by them that they were only treating the local condition of a disease which had infected the whole body. At best, their treatment was palliative which was also the case with what they were pleased to call 'conservative methods'. Pure surgery had to descend from its high position and call to her aid the other medical branches. Good hygienic conditions, invigorating climate, pure air and Sun were recommended though still main work was to be done by the knife. The results however continued to be poor. Even with the aid of vaccines, chemical therapy and various other branches of physiotherapy no better results were achieved. Thus, surgery gradually became relegated

*Specially contributed to the 'Antiseptic'.

to an inferior position in the treatment of glandular tuberculosis. The general practitioner is not the wiser for this surgical adventure. He still gropes in the dark so far as the treatment of this disease is concerned. He is not put on the therapeutic high road. He prescribes now one line of treatment, now another, all having one common merit that he has no faith in them. But the fight with the scourge is not therefore abandoned Experiments with new methods are constantly going on. Among the latest methods which are thus being tried is Radio Therapy which is of comparatively recent growth. It is being chiefly tried in cases of surgical tuberculosis. In Nawanagar Solarium in the course of one year 1934-35, we treated 59 cases of Glandular Tuberculosis and the results have been very encouraging so far, that the revival of the hopes of finding a radical treatment for the disease would not be wholly unjustified. Of course, Ray Therapy does not lay claim to an exclusive line of treatment. Pure air, plenty of sun light, a suitable dietary, rest and good hygienic conditions are prescribed by the Ray Therapeutist in addition to his special line of treatment. Even surgical operations have to be performed before the treatment could be given with advantage. Thus, in 20 cases the glands had to be operated either because they were enlarged to an enormous size or were threatening to burst up or on account of the presence of fistulous tracts. I append herewith classified record of the 59 cases treated by us at the Solarium. On the whole by Ray treatment the general condition of patients improved very much and good aesthetic results were obtained. Average period of treatment was from two to four months.

1. Aetiology

1. *History* of tuberculosis in the family was found in 5 cases and history of contact with tuberculous patients was available in 2 cases.

2. *Age*. It is found commonest in the first and third decades of life.

1 to 10	19 cases.
11 to 20	16 „
21 to 30	22 „
31 to 40	2 „

3. *Sex*.

Males	27.
Females	32.

4. *Residence*.

City life	47.
Village life	12.

5. *Caste*.

Hindus	40.
Mohammedans	16.
Others	3.

6. *Primary cause* was found in 35 cases.

2. Pathology

Site.	Neck.	50 cases.	8 cases of bilateral enlargement of glands and 2 cases of glandular lesions on one side of neck and axilla.
	Axilla.	6 „	
	Groin.	3 „	

Duration of disease.

Minimum	25 days.
Maximum	10 years.
Average	10 months 20 days.

Stages of Glands.

1. Simple Adenitis with free movable glands. Cases 14.
2. Periadenitis and caseation ... „ 35.
3. Suppurating adenitis and fistulae ... „ 10.

General Symptoms.—Were observed in 12 cases. They were fever, emaciation, anaemia and debility. Secondary pyogenic infection was observed in 5 cases.

Treatment.—All patients were advised rest, fresh air and good hygienic conditions. Quantity of fat in the diet in the form of milk and butter was increased. They were advised to protect themselves from chill and dust. Jamnagar climate is more or less sea climate and that was very beneficial in glandular tuberculosis. Cod liver oil, iron and calcium were generally administered. Operative treatment was resorted to in 20 cases under the following circumstances.

1. Massive enlargement of glands ... 5 cases.
2. Caseation ... 3 „
3. Secondary infection and sinuses ... 12 „

Out of the cases treated 48 received outdoor treatment. 11 patients were kept indoor. Radio Therapy consisted of solar

radiations, total or ultra violet, artificial ultra violet and Deep X-ray. Best results were seen with solar radiations where ultra violet and total radiations were given in a combined form. Some cases improved only after exposure to Deep X-rays.

Skin sensibility tests showed that most of the patients were not very sensitive to solar radiations, hence, they could be given large doses of these radiations without ill-effects.

Table No. I

Sun light	Natural Artificial	(STR.) (Arc lamp)	... ...	52 14
Ultra violet	Natural Artificial	(SGUV.) (Mercury lamp)	... ...	53 3
Deep X-rays.			...	8

Duration of treatment.

Minimum	2	weeks.
Average	7	,,
Maximum	20	,,

Results.

Cured	25	cases.
Relieved	17	,,
Discontinued otherwise	17	,,

Conclusions.

1. General health improves far better under this line of of treatment.
2. Scars left behind are nearly invisible and there is very little disfigurement.
3. No interference with lymphatic circulation.
4. Natural protective power of lymph glands retained.
5. Educational value: Patient learns up the habits of regulated and open-air life.
6. This is really the radical line of treatment as natural resisting power of the body is stimulated to rise up to the occasion.
7. Radiotherapy is not the quack method of application of artificial rays by any man without proper means and knowledge. Skin sensibility of each patient must be studied. Solar radiation ought to be accurately measured. Proper doses of different kinds of rays ought to be adjusted. There should be facility for Deep X-ray or Radium rays for cases which do not improve under Solar radiation. Radio Therapy is a special branch of medicine and good results can only be obtained if scientific study and method are brought to bear upon the treatment of each case.

TWO DIFFERENT ASPECTS.

Reg. No. 751. Name—Asgarally Dhaudbai. Age—4 years. Disease—Adenitis-Neck. Treatment—S. T. R. & S. G. U. V. Result—Relieved

BEFORE. AFTER.

Reg. No. 765. Name—Davu Jutha. Age—25 Years. Disease—Adenitis Neck. Treatment—S. T. R. & S. G. U. V. Result—Relieved.

[For fuller particulars, please see Appendix]

AFTER. BEFORE.

Reg. No. 1334. Name—Indulal Mohanlal. Age—3 years. Disease—Adenitis Neck. Treatment—S. T. R. and S. G. U. V. Result—Cured.

BEFORE. AFTER.

Reg. No. 274. Name—Hamubai Osman. Age—30 years. Disease—Adenitis Neck. Treatment—S. T. R. and S. G. U. V. Result—Relieved.

[For fuller particulars, please see Appendix]

Reg. No. 1773. Name—Rughnath Premjee. Age—17 years. Disease—Adenitis Neck. Treatment. —S. T. R. & S. G. U. V. Result—Relieved.

Reg. No. 1082. Name—Bavri. Age—20 years. Disease—Adenitis Neck. Treatment— S T. R. & S. G. U. V. Result—Relieved.

Reg. No. 582. Name Nirmala Premlal. Age—9 years. Disease—Adenitis Groin. Treatment—A.T.R., S.G.U.V. & Arc. Result—Operated and Cured.

Reg. No. 1185. Name—Nilakanthrai Motilal Age—16 years. Disease—Adenitis Groin. Treatment—S.T.R. & S.G.U.V. Result—Relieved.

[For fuller particulars, please see Appendix]

Reg. No. 316. Name—Merajee Hirjee. Age—25 years. Disease—Adenitis Axilla. Treatment—S. T. R. & S. G. U. V. Result—Cured.

Reg. No. 1310. Name—Gokubai Kaisan Age—25 years. Disease—Adenitis Neck. Treatment —Deep X-Ray Operation Removal. Result—Cured

Regd. No. 33. Name—Sagram Khima. Age—9 years. Disease—Adenitis, Neck. Treatment—Arc. Lamp. Result—D. T.

Reg. No. 1772. Name—Abdur Rahman Shorbad Age -10 years. Disease—Adenitis Axilla. Treatment—S. T. R., S. G. U. V. Deep X-Ray. Result—Relieved.

[For fuller particulars, please see Appendix]

APPENDIX

Showing Details of 59 Cases Treated at the Nawanagar Solarium

No.	Regd. No.	Name.	Age.	Sex.	Residence.	Caste.	Disease.	Duration.	TEST. Immediate. Se 1	Se 2	Se 3	Deferred. Se 1	Se 2	Se 3	Pigment. Se 1	Se 2	Se 3	Duration of Treatment.	Treatment.	Result.	Stage.
1	33	S.	9	M.	Vijarkhi	H. Koli	Adenitis neck	2 Months	—	—	—	9	—	—	—	—	—	25 days	Arc.	Dt.	1
2	50	M.	15	F.	Jamnagar	Hindu	,,	6 Weeks	—	—	—	—	—	—	—	—	—	20 ,,	Arc.	,,	2
3	391	N.	22	F.	Bhavadar	H. Lohana	Neck Bilateral	2 Months	1	4	12	—	—	—	—	—	—	1 Month	Str. & Sguv.	,,	2
4	86	M.	12	F.	Kutiyana	H. Lohar	,, ,,	3 ,,	—	—	—	—	—	—	—	—	—	2 ,,	,,	Cured	2
5	102	M.	17	M.	Jamnagar	H. Brahmin	Axilla	6 Weeks	3	12	—	—	—	—	—	—	—	2 ,,	,,	,,	2
6	402	M.	28	F.	,,	H. Nagar	Neck	1 Month	6	12	—	—	—	—	—	—	—	2 ,,	,,	Dt.	2
7	198	K.	20	M.	,,	Mohammedan	,, Bilateral	4 ,,	—	—	—	—	—	—	—	—	—	3 ,,	,, Arc Deep X-ray	Cured	2
8	54	C.	28	F.	,,	Hindu	,, ,,	2 ,,	—	18	—	—	—	—	—	—	—	2½ ,,	,, ,,	,,	2
9	70	H.	3	M.	,,	Mohammedan	,, ,,	2 ,,	—	14	—	4	18	—	—	—	—	15 days	,, Arc	Dt.	2
10	281	A.	21	M.	Lalpur	,,	,, ,,	2½ ,,	10	14	18	10	15	18	9	18	—	20 ,,	,, ,,	,,	2
11	316	M.	25	M.	Jam Bhimdi	Koojа ,,	Axilla	2 Years	2	12	17	10	—	—	2	12	—	3 Months	Str. and Sguv.	Cured	3
12	338	J.	30	F.	Jamnagar	H. Brahmin	Neck and Axilla	2½ ,,	—	—	—	16	—	—	—	—	—	15 days	Str. & Sguv. Arc.	Dt.	2
13	349	B.	4	M.	,,	H. Darji	,, ,,	6 Weeks	8	—	—	2	6	16	4	14	8	1 Month	,,	Cured	2
14	359	M.	18	M.	Kalavad	H. Bania	Neck Bilateral	5 Years	3	8	12	2	6	12	2	6	—	20 days	Str. & Arc. Hg Lamp	Dt.	2
15	331	S.	23	F.	Jamnagar	H. Darji	,, ,,	1½ Months	—	—	—	18	—	—	6	12	—	4 Months	Str. & Sguv. Deep X-ray	Cured	2
16	403	J.	7	M.	,,	Pakhali	Neck	2 ,,	8	12	—	2	12	—	—	—	—	1 ,,	AB and Arc	Dt.	2
17	413	C.	7	F.	,,	H. Brahmin	,,	2 ,,	2	10	15	2	10	15	2	8	14	3 ,,	,,	Cured	2
18	432	K.	24	M.	Dwaraka	H. Kadia	,,	3 ,,	6	12	—	2	8	—	4	10	—	1 ,,	Str. and Sguv. Arc.	,,	3
19	482	D.	20	F.	Meaderda	H. Bania	,,	2 Years	—	—	—	18	—	—	16	18	—	2½ ,,	,, Arc, Deep X-ray	,,	2
20	490	M.	22	F.	Jamnagar	H. Brahmin	Axilla	2 ,,	—	—	12	8	14	—	2	12	—	1½ ,,	Str. and Sguv.	,,	2
21	491	N.	21	M.	Khambhalia	H. Batvara	Neck	2 Months	8	14	—	8	—	—	—	—	—	2 ,,	,, Deep X-ray	,,	2
22	558	S.	8	M.	Jamnagar	H. Khavas	,,	2 ,,	—	—	—	12	—	—	1	14	—	18 days	Str. and Sguv.	Dt.	1
23	557	J.	10	F.	Dhoraji	Mohammedan	,,	4 ,,	—	12	—	—	—	—	—	—	—	21 ,,	,,	,,	2
24	583	H.	21	M.	Jamnagar	H. Barber	,,	1½ ,,	—	—	—	7	—	—	3	—	—	2 Months	,, Atr. and Aguv.	Cured	2
25	582	N.	9	F.	,,	H. Bania	,,	3 ,,	10	—	—	7	18	—	2	—	—	15 days	Atr. and Sguv. Arc.	Dt.	2
26	623	N.	15	F.	,,	H. ,,	,,	8 ,,	12	16	—	4	17	—	5	10	16	3 Months	Str. and Sguv. Arc.	Cured	3
27	673	G.	16	M.	Palitana	H. ,,	,,	2 ,,	10	—	—	10	—	—	—	—	—	20 days	Str. and Sguv.	Dt.	3
28	769	J.	2	F.	Jamnagar	Vora	,,	4½ ,,	10	—	—	12	18	—	—	—	—	20 days	,,	Cured	2
29	766	K.	22	F.	,,	H. Brahmin	,,	4 Years	12	16	—	4	17	—	5	10	16	3 Months	,,	Relieved	2
30	958	J.	28	M.	,,	Parsee	Groin	2½ Months	10	—	—	10	—	—	—	—	—	21 days	,,	Cured	1
31	1007	S.	5	F.	,,	H. Brahmin	Neck	25 Days	3	12	—	2	8	15	2	8	15	25 ,,	,,	,,	1
32	917	M.	25	F.	,,	Mohammedan	,,	3 Years	—	—	—	5	8	18	—	—	—	2 Months	,,	,,	1
33	895	U.	20	F.	,,	Christian	Groin	3 ,,	6	8	—	—	—	—	—	—	—	20 days	,,	,,	1
34	1132	M.	20	F.	,,	H. Kadia	Neck	6 Months	14	18	—	14	18	—	12	—	—	25 ,,	,,	,,	2
35	1085	B.	20	F.	Idar	Hindu	,,	8 ,,	14	18	—	10	14	—	18	—	—	20 ,,	,,	Relieved	3
36	765	D.	25	M.	Balambha	H. Darji	,,	6 ,,	2	12	—	3	12	—	2	8	14	5 Months	,,	,,	3
37	1029	A.	35	F.	Jamnagar	Parsee	,,	2 ,,	3	11	14	9	12	—	—	—	—	4 ,,	,,	,,	1
38	139	V.	2	F.	,,	H. Bania	,,	2½ ,,	—	—	—	—	—	—	—	—	—	27 days	,,	,,	2
39	184	A.	18	M.	,,	Mohammedan	,,	1 ,,	18	—	—	18	—	—	—	—	—	28 ,,	,,	,,	2
40	1465	O.	25	M.	Kutiyana	Memon	,,	2 ,,	3	10	2	—	—	—	—	—	—	2 Months	,,	Cured	2
41	1499	S.	2½	F.	Jamnagar	Vohra	,,	2 ,,	—	—	—	—	—	—	—	—	—	1½ ,,	,,	,,	3
42	1546	H.	2½	F.	,,	,,	,,	1 Year	—	—	—	—	2	8	—	—	—	15 days	,,	Dt.	3
43	1642	M.	16	M.	,,	Mohammedan	,,	7 Months	6	10	14	7	18	—	—	—	—	1½ Months	,,	Cured	2
44	1760	J.	6	M.	,,	H. Lohar	Axilla	10 ,,	—	—	—	6	9	—	4	9	18	20 days	,,	Dt.	2
45	1772	A.	10	M.	,,	Mohammedan	,,	1 ,,	6	10	12	—	18	—	—	—	—	2 Months	,, Deep X-ray	Relieved	1
46	1842	D.	35	M.	,,	H. Girasia	Neck	10 Years	5	13	16	—	—	—	—	—	—	2 ,,	,, ,,	,,	2
47	1876	A.	25	M.	,,	H. ,,	,,	1 Month	6	—	—	—	—	—	—	—	—	15 days	,,	Dt.	1
48	247	S.	7	F.	,,	Hindu	,,	1 ,,	2	14	—	3	11	—	—	—	—	15 ,,	,,	Relieved	1
49	175	M.	23	F.	Khaperda	H. Lohar	,,	1 ,,	3	8	—	4	10	—	—	—	—	25 ,,	,,	,,	2
50	257	A.	25	F.	Jamnagar	H. Bania	,,	1 ,,	2	12	—	16	—	—	—	—	—	20 ,,	,,	Dt.	2
51	274	H.	30	F.	Jam Jodhpur	Mohammedan	,,	2 Years	6	10	—	5	11	—	—	—	—	1½ Month	,,	Relieved	1
52	327	M.	11	F.	Jamnagar	H. Bania	,,	2 Months	2	11	14	—	—	—	—	—	—	15 days	,,	,,	2
53	373	B.	7	F.	,,	Moh. Vohra	,,	8 ,,	1	4	14	5	14	—	—	—	—	18 ,,	,,	,,	2
54	478	S.	25	F.	Dhoraji	H. Bania	Groin	1 Year	1	10	—	1	—	—	—	—	—	1 Month	,,	,,	2
55	1185	N.	16	M.	Jamnagar	H. Nagar	,,	6 Years	—	—	—	12	14	—	—	—	—	2 ,,	,,	,,	2
56	1773	R.	17	M.	,,	H. Vanza	Neck	10 ,,	2	5	11	15	18	—	15	—	—	2 ,,	,,	,,	2
57	751	A.	4	M.	,,	Moh. Vora	,,	1½ ,,	14	—	—	4	12	—	4	8	16	2½ ,,	,,	,,	2
58	1334	I.	3	M.	,,	H. Bania	,,	3 ,,	—	—	—	—	—	—	—	—	—	2 ,,	Deep X-ray	Cured	1
59	1310	G.	25	F.	Khambhalia	H. ,,	,,	6 ,,	—	—	—	—	—	—	—	—	—				

STAGE I:—Simple Adenitis with free movable gland.
STAGE II:—Periadenitis and caseation.
STAGE III:—Suppurating adenitis with Fistulæ.

RETROPERITONEAL CYSTS *

BY

Dr. V. M. KAIKINI, B.A., M.B.,B.S., F.R.C.S., (Edin.),

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PATHOLOGICALLY and embryologically, mesenteric, omental, and retroperitoneal cysts, can all be actually classed as retroperitoneal Cysts.

Retroperitoneal cysts are supposed to be among the rare tumours in the abdomen. According to Hadfield Jones, retroperitoneal cysts are those cysts lying in the retroperitoneal fatty tissues, which have no apparent connection with any adult structures save by areolar tissue. They may arise from any of the three germinal layers; and according to Bland Sutton, those arising from the ectodermal and endodermal elements are classed as dermoids, and the mesodermal ones are called mesodermoids. The etiological factors of retroperitoneal cysts may be classified as follows:

1. *Remnants of the embryonic retroperitoneal organs, such as germinal epithelium, ovary, Wolffian and Mullerian bodies, become displaced forward between the mesenteric layers.* The rare pararenal cysts probably are not displaced into the mesentery. These cysts bear a close resemblance to the mesenteric cysts. Dermoids of the mesentery apparently arise from the ovary. Retroperitoneal or mesenteric dermoids rarely occur in the males, although they occur in the testis which is originally a retroperitoneal organ.

2. *Displaced embryonal intestinal tissue sequestrations, from intestinal diverticula or from the vitelline duct, become displaced between the mesenteric layers.* Cysts from intestinal diverticula may occur anywhere along the bowel, while those from the vitelline duct occur principally in the terminal ileum.

3. *Lymphatic and Chylous Cysts.*—They are supposed to arise from developmental or obstructive phenomena of the retroperitoneal and mesenteric lymphatic system. But the retroperitoneal lymphatic vessels anastomose so freely that it does not look possible that plugging of a lymphatic vessel would produce a cyst. So this etiological factor is rather doubtful.

4. *Dermoid Cyst.*—From imperfect closure of the abdominal places or from strayed genital cells or from supernumerary ovaries.

5. *Mesocolic Cysts.*—These arise from pockets of peritoneum

* Specially contributed to the Antiseptic.

left between the opposed serous surfaces of the mesentery, and parietal peritoneum, in the early rotation of the colon from the left to the right.

6. *Parasitic and Inflammatory Cyst.*—These are usually echinococcal or from tuberculous lymph glands.

7. *Trauma and foreign bodies.*—Haematoma from injury may degenerate into a cyst or they may form round foreign bodies left in the abdominal cavity. Because of the complicated development of the urogenital system and the fact that most of the Wolffian system disappears in the female and most of the Mullerian in the male, there are many possibilities of cyst formation. Practically all Wolffian cysts have been found in the female because of the utilization of the Wolffian duct in the formation of the male genitalia.

PATHOLOGY.—These tumours may be very small or so large that they fill the entire abdomen. The wall of the cyst is usually very thin, and they contain a yellow or brown fluid and are lined with cuboidal or columnar epithelium. In some cysts there are papillary projections and in others there is the structure of the multilocular compound cystic ovarian adenoma. Usually malignancy is present in the latter condition. In the case of dermoid cysts, the contents are sebaceous material, hair, bone and other embryonic tissue.

SIGNS AND SYMPTOMS.—Enlargement of the abdomen either local or general is usually the only complaint of the patient. Pain is a very rare symptom although it may be sometimes present due to pressure on nerves. The colon, ureter or kidney may be displaced by the tumours but intestinal obstruction, rupture, torsion etc. are very rare in those cysts which lie behind the posterior parietal peritoneum They might occur in mesenteric cysts. An asymptomatic soft, rounded, fairly fluctuant abdominal tumour, which, if in the region of the kidney, can be felt well in the flank or by bimanual examination, is very suspicious of a retroperitoneal tumour. According to Moynihan, mesenteric cysts are generally near the umbilicus very mobile especially in the transverse direction and surrounded by a zone of resonance with occasionally a resonant band directly across the tumour Pain is more frequently present in mesenteric cysts, than with any other type of abdominal cystic tumour and a history of repeated attacks of abdominal pain sometimes with vomiting and alternative periods of diarrhoea and constipation is very important. The retroperitoneal variety on the other hand is usually in the right or left lateral abdomen and not movable or only slightly so.

Lymphatic cysts are usually without any epithelium. Rarely they have flat or low cuboidal lining in several areas. The chylous, lymphatic cysts contain milky fluid. Dermoid cysts contain sebaceous material, hair, teeth etc, and enterogenous cysts are lined by intestinal epithelium.

Mesocolic cysts lie anterior instead of posterior to the spermatic vessels. Retroperitoneal cysts lie free in the retroperitoneal fatty tissue, are unconnected with any other organ and have no pedicle. As the line of cleavage is found easily, shelling out of these tumours can be done without much difficulty, when the tumours are small and uncomplicated. When the cysts are extensive and adherent, marsupialization is to be done and great difficulty is experienced in the case of large dermoid cyst especially when the contents degenerate into purulent matter The tumours can be reached with the right or left para median incision except when the tumour is closely related to the kidney and lumbar incision has to be employed. Two cases are mentioned here. In both, the daignosis was not clear as symptoms were atypical and both occurred in females.

Case 1:—Mrs. Y. P, age 39. The patient was admitted for a big tumour in the left hypochondriac region about the size of a large sized cocoanut. Duration about 20 years. Started as a small tumour in the left hypochondriac region just near the splenic area. It never caused any inconvenience or any other symptoms like pain etc. It gradually grew in size. When shown to doctors in the early stages it was suspected to be a splenic tumour. Radiograms had been taken and calcified areas were detected, so it had been diagnosed as a case of haemorrhagic cyst of the spleen. She was treated with calcium and iron and arsenic injections. But the tumour went on increasing in size till it attained its present size. The tumour was a fixed one and was noticeable anteriorly and laterally and there was no bulging posteriorly. It was tense but fluctuation could be elicited. There was no pain or tenderness.

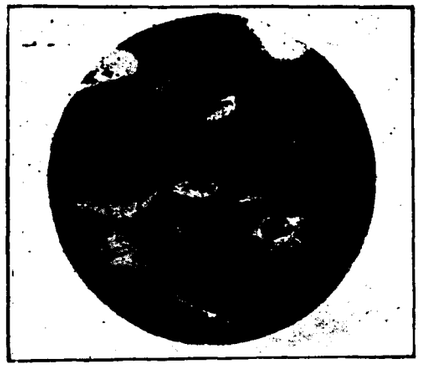
The abdomen was opened through a left paramedian incision. A big tumour was found just below the spleen having no connection with it but adherent to the other adjacent structures and having large dilated vessels scattered over its surface. Apparently it was a retroperitoneal tumour. As the mass was a very big one and it was difficult to mobilize the descending colon on account of its deep and invisible position, an attempt was made to enucleate the tumour by tearing through the peritoneum in the interval between the dilated vessels. At first the enucleation looked easy

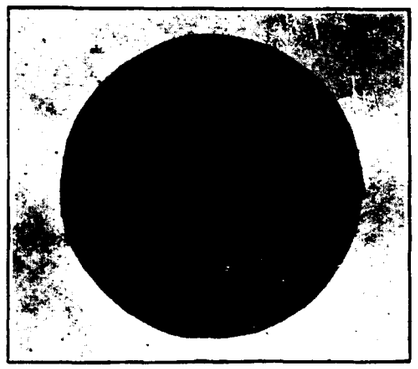
but as the tumour was getting freed it was found to be so large that in freeing it the blood vessels coursing over it had to be clamped, which naturally would have deprived the colon of its blood supply. The coat of the tumour was fairly thick. To reduce the size of the tumour aspiration was done and a good deal of fairly thick purulent fluid was taken out. During the manipulations the capsule gave way in more than one part and large amount of thick viscid matter and pus was ejected. It was then found that the tumour was a big suppurating dermoid and contained large amount of hair cartilage and all the component parts of an embryo. In removing the tumour profuse bleeding occurred which could be controlled with difficulty. The tumour was completely removed and was found to lie in the interval between the pancreas and the left kidney. At first it was thought to be a dermoid of the pancreas but it was not found to be closely connected with that organ. The large amount of bleeding and the sudden removal of a large intra abdominal tumour produced intense shock in the patient and she never recovered from it. She died soon after the operation.

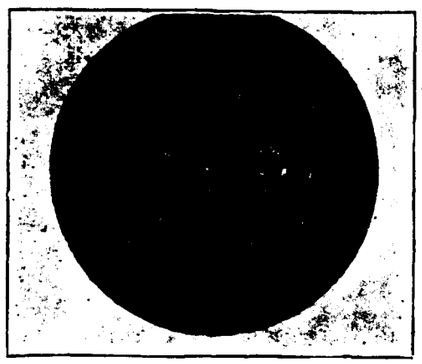
The tumour was big and thick walled containing purulent and sebaceous material and embryonic remnants like hair, nails etc., apparently a suppurating dermoid.

Case II. Mrs. A. age 47. The patient was admitted for tumour in the left lumbar region of the size of a small cocoanut slightly movable laterally but not vertically. It was first noticed only about a year ago. Patient had an ovarian cyst removed about seven years ago. There was slight pain in the back and the left thigh but no local tenderness in the tumour. No trouble with urine. As the tumour was exactly in the kidney region, a cystoscopic examination was made, and the left ureteral opening was found to be blocked by a small wormlike piece of tissue brownish in colour ; and similar pieces were found four or five in number sticking to the bladder-wall round about the ureteric opening. The ureteral catheter could be passed only about a couple of inches up the left ureter. Pyelographic examination indicated an irregular pelvis showing two separate but close lying shadows square in shape. So, some pathological condition of the kidney was suspected. The abdomen was opened through the left paramedian incision and lobulated tumour of the size of a fairly big cocoanut was found protruding from the posterior abdominal wall. An incision was made in the posterior parietal peritoneum about three inches lateral to the descending colon, and the descending colon was mobilized and the posterior parietal peritoneum reflected

RETROPERITONEAL CYSTS—V. M. KAIKINI.







PATHOLOGIST'S REPORT.

The specimen sent consists of fragments of fibrous capsule, large number of blood clots and a few whitish masses which at places showed a papillary structure.

The section through the wall shows that it consists essentially of fibrous tissue. It is lined by epithelial cells which are cubical in some places and columnar in others. The cells are arranged in layers two or three deep and in some portions they form thick papillary processes.

The section through the solid mass consists of spheroidal cells which are arranged in masses and are separated by thin strands of connective tissue which is rich in blood vessels. The blood vessels being newly formed are prone to produce haemorrhages. The epithelial cells show degenerative changes of a hyaline nature in some places.

The growth shows the characters of a carcinoma from the microscopic examination. It is difficult to say exactly where the carcinoma has started from.

from the surface of the tumour. There was some difficulty in separating the peritoneum, as it was very friable and a fairly large vein most probably the inferior mesenteric got torn and had to be tied.

The ureter was found to be closely surrounded by the tumour mass and had to be set free with a good deal of caution. The tumour was found to be closely connected with the lower pole of the kidney and firmly attached to its capsule. During the manipulation it burst in two or three places, the wall being very friable, and a good deal of dark clotted blood and whitish granular material (resembling malignant tissue) exuded from inside. The kidney was found to be completely separate from the tumour and there was no direct connection between them except that the capsule was closely adherent to the tumour. But no appreciable pathological changes were found in the kidney. The abdomen was closed with a drainage tube in the side. The postoperative course was uneventful and the patient was discharged free from all symptoms.

Comments

In both the cases the symptoms were typical of retroperitoneal tumours *viz.* insidious localized enlargement in the region of the kidney, painless and practically immobile. Both occurred in females. In case (1), perhaps the better method of operation would have been to open the cyst from the flanks or posteriorly and marsupialize it. It is difficult to surmise what would have been the further course of the case even after marsupialization taking into consideration that the tumour had suppurated.

In case (2), it is difficult to account for the presence of worm-like material coming out through the ureteral openings. Most probably this was due to the pressure of the tumour mass on the lumen of the ureter.

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NOTES ON CASES OF DISEASES OF THE HEART *

BY

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WORKING in a Metropolitan Hospital, like the Rangoon General, very useful, statistical knowledge could, in my opinion, be gained about the incidence of the diseases of the heart, in a tropical city, and with this object, and also with the view of stressing certain points about the treatment of diseases of the heart which does not seem to be properly appreciated, I intend to review a series of 110 cases that I have studied.

First—as regards the incidence, it is as follows:

Age	1–10 = 2	The highest incidence, therefore seems to be in the fourth decade. It does not, mean, however, that the original endocarditis happened at that period, but at that age the condition became acute enough for hospitalisation of the patients.
„	11–20 = 10	
„	21–30 = 27	
„	31–40 = 29	
„	41–50 = 16	
„	51–60 = 16	
„	61–70 = 8	
„	71–80 = 2	

Secondly—as regards sex:

Males preponderated by 85 to 25 and this relation holds good in comparison with statistics of other cities. The reason is obvious, as the population of Rangoon is preponderatingly male.

Thirdly—as regards race:

Burmese	...	28	This shows that the disease is equally distributed among the inhabitants of Rangoon, and it has no special predilection for a certain class.
Indians	...	54	
Chinese	...	10	
Anglo-Indians and Europeans	...	18	

Fourthly—as regards occupation:

Described as "nil" which means that the patients were in a bad state for over a long period rendering them unfit for any employment and necessarily chronics ... 48

Skilled mechanical workers	... 12
Trades people	... 14
Hard Manual workers	... 22
Belonging to the services	... 14

The only thing here revealed is that it is not only the hard manual workers working in the damp hot climate of Rangoon

* Specially contributed to the Antiseptic.

that are the ones who suffer from it, but is also equally prevalent amongst people who have a more or less sedentary life, and the reason becomes apparent when we consider the causation of such diseases.

Fifthly—the clinical forms of heart diseases present:

In compiling this, I have not taken the vague terms that have been sometimes used in the column "diagnosis", but have sifted all the evidence recorded in the case sheet, and the findings of a post-mortem, if any, on such cases. The list shows them according to their prevalence.

(1)	Mitral Regurgitation	...	34
(2)	Aortic Regurgitation	...	30
(3)	Mitral Stenosis	...	10
(4)	Myocarditis	...	8
(5)	Chronic Subacute Endocarditis	...	6
(6)	Hypertension	...	6
(7)	Tricuspid Regurgitation	...	6
(8)	Rheumatic Endocarditis	...	5
(9)	Aneurism of the Aorta	...	3
(10)	Aortic Stenosis	...	2
(11)	Aortitis	...	1
(12)	Coronary thrombosis	...	1
(13)	Congenital heart disease	...	1
(14)	Paroxysmal tachycardia	...	1

Mitral Regurgitation heads the list, and it is undoubtedly more in evidence than other forms of heart disease in the tropics. The cases of tricuspid regurgitations were mostly due to chronic emphysema with dilatation of the right heart, and in 4 out of 6 cases it was a "relative" insufficiency. Primary Tricuspid regurgitations, therefore, are really few. The Myocarditis cases were mostly toxic in origin, and cases described as rheumatic endocarditis are such, as had not finally settled down on certain valves.

Sixthly.—the causation:

This was very difficult to ascertain in the majority of cases, as there were no systematised attempts made in elucidating the cause. Really speaking, co-ordinated efforts are required of all concerned in getting at the real truth. Still valuable facts were found, as far as it was investigated.

(1) *Rheumatic fever*—was responsible for 7 cases of Mitral regurgitation.

1 case of Tricuspid regurgitation.

3 cases of Rheumatic endocarditis.

(2) *Syphilis for*—
16 cases of Aortic regurgitation.
6 cases of Mitral regurgitation.
1 case of Mitral Stenosis.
2 cases of Endocarditis.
2 cases of Aneurysms.

(3) *Asthma was responsible for*—
2 cases of Tricuspid regurgitation.
1 case of Mitral regurgitation.

(4) *Pneumonia was responsible for*—
1 case of Myocarditis.

(5) *Congenital defect*—
1 case of patent foramen ovale.

(6) *Malaria.*—
1 case of hypertension.

(7) *Hyperpiesis.*—
1 case of Bronchitis and dilated heart.

(8) *Chronic sinus infection.*—
2 cases of chronic infective endocarditis.

The interesting fact brought out by this statistics is that though Syphilis has a preponderating predilection for the Aortic Valves, it also produces a fair number of Mitral valve injuries. Of the three cases of Aneurysm of the Aorta, 2 were caused by Syphilis, but in the other case it was negatived both by history and blood examination, and it seemed to be occupational in origin. From my experience, I could unhesitatingly say that I have seen cases of Aortic regurgitation from Rheumatic origin, though the incidence of Rheumatic fever is in the majority of cases on the mitral valve. Malaria is a potent cause of hypertension in the tropics, besides the other usual causes prevalent in temperate climates.

Seventhly.—Other attendant conditions which were not directly due to the diseases are interesting, because it shows that in the tropics we are often called upon to treat patients not suffering from one disease at a time but a complexity of them. The following is the list :—

Kidney diseases		...	18
Anæmia		...	9
Asthma		...	6
Hyperpyrexia, Pneumonia, Chronic Bronchitis	each	...	3

Jaundice, Portal Cirrrhosis & hæmatemesis, Hæmoptysis	each	...	2
Gastric ulcer, Miliary tuberculosis, Stricture of Urethra, Glycosuria, Beri Beri, Insomnia, Epistaxis, Polyserositis, Abortion, Elephantiasis Scrotum	„	...	1

Treatment consisted of the use of the following and the methods were more or less the same with all physicians :—

Tr. digitalis headed the list irrespective of the classes of heart diseases.
Iodides
Salicylates
Caffeine Citrate & Sodium Benzoate
Intravenous Strophanthin
Cardiozol
Cardiosthenin
Urea
Salvarsan, sulfarsenal, solusalvarsan and allied arsenicals
Digifortis

Results were as follows :—55 died. 51 were relieved of all symptoms. 4 went home on their own accord without obtaining any relief. This however reflects no discredit to us, as the cases that died were mostly very advanced on admission and were such as were previously treated and discharged relieved. The accommodation in the Rangoon General Hospital is insufficient, and cases of heart diseases do not get a chance of admission and prolonged rest essential to clinical cure, unless they come in thoroughly decompensated and are in a condition when admission cannot be refused. Most cases in earlier stages are not diagnosed at all and are dubbed as insomnias, constipation, anaemia and so on and go on having ineffective treatment until they thoroughly break down. Unless there is sufficient accommodation and there are opportunities to systematically examine patients coming to outptients, diseases of the heart will remain unrecognised until signs of decompensation become obvious, and almost staring at one's face. Mistakes of the other extreme are also not infrequent, when

anyone manifesting any alteration of the heart sound of the character of a bruit is diagnosed as disease of the heart, and are given Tr. Digitalis as treatment to be continued indefinitely until it kills or cures. The essential thing therefore to prevent such a large mortality in diseases of the heart lies in their early recognition, a fact stressed by all cardiologists from Mackenzie downwards.

It will perhaps be of some use if I give my personal experience of the use of digitalis group of drugs in the treatment of Cardio-Vascular diseases. The group of drugs is headed by the most important of them and that is, digitalis, and after prolonged use of all its preparations, I am convinced that nothing is more useful than the tincture, when it is fresh and standardised. The irrational use, however, of digitalis in heart diseases is quite common, and it seems that whenever anything appertaining the heart is in a practitioner's mind, digitalis is usually resorted to. The main pharmacological action of digitalis may, however, be recapitulated with advantage in this connection, and that is :

(1) Tonicity is increased.
(2) Contractility is stronger.
(3) The Refractory phase is made longer.
(4) The conductivity is increased but made slower.
(5) Partial heart block is exaggerated by long refractory pause.
(6) In auricular fibrillation.

The auricular rate is mostly decreased by lengthened refractory period, and the ventricular rate is slowed by lengthened refractory phase of bundle.

The two main indications of digitalis will therefore be (*a*) auricular fibrillation and (b) dilatation. Whenever these two conditions have supervened from any disease of the heart or blood vessels, digitalis has been found to be eminently suitable. The two phenomena are so clearly indicated by clinical symptoms that it is not necessary to resort to any complicated investigation such as electro-cardiogram etc.

If one would peruse the usual text books of Pharmacology the indications are given in full, but the following conditions which obtain largely in our practice in the tropics do not seem to have been adequately described.

(1) In the heart failure of Beri Beri, Digitalis seems to have no action in averting the catastrophe. In the oedematous stage intravenous administration of adrenalin will in a fair number of

cases procure benefit, but strychnine seems to be the drug of choice, in the subacute cases. In the heart failure of Beri Beri, there is neither auricular fibrillation nor dilatation, but the muscles themselves are diseased.

(2) In the impending heart failure of epidemic dropsy, Digitalis also seems to be a drug of no particular value. The Pathological condition of the heart is allied to Beri Beri, and Arjuna and Cactus have been found to be distinctly superior to digitalis, along with calcium.

(3) Fatty deposits in the heart of elderly females who grow stout with age. This condition is quite common in the tropics amongst women of the more leisured class, and in many cases it is attended with hypothyroidism. The blood pressure is low, there is physical inaptitude, sleep is prolonged, and exhaustion after exertion is marked. There is always some difficulty also with the periods. The intake and quality or quantity of food does not seem to influence the deposit of adipose tissue. Digitalis was found of no use to me in treating such cases, whereas thyroid gland preparations, judiciously given with strychnine and other nervine tonics are distinctly useful.

(4) The class of cases, with tachycardia and effort syndrome that we generally find amongst the ill-fed and overworked clerks and amongst the lower middle classes. These cases are getting quite frequent in our practice in Rangoon and it seems entirely a vitamin deficiency condition. Digitalis is of little use in these cases, and though in the beginning a temporary benefit is felt by the patients, it soon upsets their digestion and leads to further deterioration. The disease is therefore mainly due to semistarvation and the remedy is in a judicious dietary.

(5) Vitamin deficiency with Anasarca of the labouring class people of the tropics. In this condition the quantity of food is made up of cheap white rice and leafy vegetables with occasionally a little dried fish and abundance of chillies, but the quality is deficient from economic reasons, which is getting more and more acute in this Metropolitan town. The cases appear clinically as chronic parenchymatous nephritis and are usually treated as such with diuretics and digitalis, but the patient fails to improve as I have pointed out in an article in I. M. G. of August 1934. It is only amenable to dietary, iron and tonics like strychnine.

OCULAR SYMPTOMS IN VITAMIN. A DEFICIENCY*

BY

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IT is well known that the human eye may be seriously affected by the absence of certain factors in the food. We know today that it is not the absence of lipoids as such which is responsible for the outbreak of more or less serious eye trouble, but that it is the lack of vitamines and especially of the soluble vitamin. A. Although some eye diseases have, in the past, been considered associated with faulty nourishment, there has been no clear understanding of the conditions. Even modern textbooks of ophthalmology treat the various symptoms of vitamin. A deficiency, although associated with each other, as different disease, because the eye is affected in various parts. The enumeration, therefore of the symptoms or stages can be studied best in adults.

I. Nightblindness.

This is the inability of the patient to see in the dark, especially after sunset. In mild cases, the patients are unable to read or do any fine work in the evening, in severe cases, patients lose their orientation on the street after sunset and cannot find their way home. There are several diseases of the retina, choroid, and optic nerve, which are accompanied by nightblindness as a consequence of the fundus legions, which are visible with the ophthalmoscope. The night blindness under discussion, however, which is the first symptom or one of the first of lack of vitamin, A in the food, is not accompanied by positive findings on the eye ground. At least eyeground changes are not visible with the usual methods of examination. It is therefore called essential nightblindness or hemeralopia. In vitamin. A deficiency night-blindness may occur by itself or associated with the other symptoms of the eye which are described below as xerosis epithelialis conjunctivæ. In servere cases the patient is conscious of the defective vision in darkness and gives spontaneously a positive history of the condition. But very often a mild degree of night-blindness is not recognised by the patient as such and he comes to the eye physician with various other complaints or with other symptoms of vitamin A deficiency. In such cases, the night-blindness is found by means of special examination for adaptation with the help of Forster's photometer or with the five points adaptometer of Birch-Hirschfeld. The examiner is often astonished at the high degree of nightblindness not recognised by

* Specially contributed to the "Antiseptic".

the patient. It is evident that intelligence plays a very important role in its recognition. The nightblindness may simply disappear as soon as better nourishment is given, or it may become associated with more severe sympoms of vitamin. A deficiency, if improper nourishment continues.

II. Xerosis epithelialis conjunctiva

This is usually the second stage of vitamin. A deficiency, as often proved by the patient's report that hemeralopia preceded it by several days or weeks. This xerosis. *i.e.* dryness of eyeball conjunctiva, appears in four clinical forms.

(*a*) *Bitot's spots*: These are triangular white spots appearing like dense foam of soap in the pelpebral fissure region with the base at the limbus and the apex directed towards the lid angle, in front of the level of the otherwise palé and normal bulbar conjunctiva. They usually first appear at the temporal side of the cornea and later also at the nasal side. As a rule they extend 3-4 mm from the limbus to the lid angle, but they may grow much larger. The nasal Bitot's spots are usually smaller than the temporal ones. The tear fluid does not adhere to the spots. In healing they break up in different islands, the normal space between them becomes larger and the tiny dry spots finally disappear, first leaving a dry zone in the conjunctiva, which is often stippled by finest superficial defects in the epithelium seen only with the slit-lamp.

(*b*) *Irregular xerosis of large parts of the bulbar conjunctiva.*— This xerosis also develops first in the palpebral fissure zone, usually representing huge irregular Bitot's spots. But in severe cases of long duration it involves also the lower half of the bulbar conjunctiva, sometimes as far as the fornix, and even the zone above the cornea, although this is constantly covered by the upper lid. It is evident in all cases, however, that this intensive xerosis above or below the cornea has its origin in the xerosis of the palpebral fissure region. In some cases the xerosis of the bulbar conjunctiva overlaps the limbus in the shape of the white sickle. A marked feature of the intensive xerosis is that it changes its location on the bulbar conjunctiva in a relatively short time so that parts of the bulbus, unaffected today, may show definite xerosis in twentyfour or forty-eight hours. The shape of those plaques is very irregular, often with sharp concave outlines, sometimes gradually disappearing into the normal conjunctiva. The colour is seldom so intensely white as that of Bitot's spots. The tear fluid does not adhere. In the stage of healing the big

plaques break up into smaller ones, sometimes changing their location from day to day, disappearing finally in a way similar to Bitot's spots. The sensibility of the conjunctiva is in all these cases reduced, sometimes very markedly. This extensive type of xerosis is in some cases associated with a slight degree of mixed infection of the bulbus and there is a certain degree of discharge, consisting chiefly of exfoliated epithelial cell bacteria and to a lesser degree of lymphocytes and leucocytes.

(*c*) *Loss of lustre of the bulbar conjunctiva.*—Is a mildest degree of epithelial xerosis. It occurs either in rather mild cases of vitamin. A deficiency or may often be seen as the remnant of such an intensive xerosis of the bulbar conjunctiva as described above under (*a*) and (*b*). It is often difficult to recognise this loss of lustre of the conjunctiva. It is necessary to compare the diseased eye with the normal one and to examine roughly the reflex of the conjunctiva in good daylight. In doubtful cases the loss of lustre may be intensified by keeping the eye of the patient open for five to ten seconds with the fingers. Through this the epithelium of the affected eye dries out quickly and the loss of lustre becomes evident. Very often finest superficial defects in the epithelium become visible in examining the conjunctiva with the reflex of a window.

(*d*) *Wrinkling of the bulbar conjunctiva*—So often seen in severe cases of vitamin A deficiency, especially frequent in complications of the cornea, is in reality only loosely connected with xerosis conjunctiva. Wrinkling of the conjunctiva is an indication that the eyeball conjunctiva has lost its normal elasticity and its normal turgor even in its deeper layers. The wrinkling seldom exists alone. It is usually seen in the palpebral fissure region, in or next to the zone of Bitot's spots and is especially found with the extensive epithelial xerosis (*b*) in cases of long duration, where the wrinkling may be found at any place of the bulbus. The little folds very often come into being by moving the eyeball in different directions. They are usually concentric to the limbus, but may run also in other directions and may even cross each other. In the severest cases of keratomalacia (see below), the folds become large and sometimes surround the cornea like a marked torus. The small and large folds are usually dry at the top, but in the valleys between them the conjunctiva may keep its lustre for a while. The small wrinkles may occur in the pale conjunctiva, but the large ones are usually found in an inflamed eyeball of curious red-violet colour, which is markedly different from a simple inflammatory red. Wrinkling is sometimes the last of the

symptoms of vitamin. A deficiency to disappear. It may be emphasized that the typical Bitot's spots are found in the beginning stage of vitamin. A deficiency, that in the more advanced cases, such as in keratomalacia. the irregular xerosis (b) small wrinkles (d), any loss of lustre of the eyeball conjunctiva (c), are present while in the severest cases and in those of long duration Bitot's spots and a real white xerosis are absent, loss of lustre and folds taking their place. This fact, at first obscure, finds its explanation in that the conjunctiva can show the white xerosis only as long as it has the epithelium of a mucuous membrane. As soon as it changes into the character of the epethelium of the skin, Bitot's spots cannot be produced.

III. Xerosis epithelialis cornea

This is the next stage of vitamin. A deficiency. It is often associated with one of the various types of xerosis of the eyeball conjunctiva, but it must be borne in mind also that it may occur alone in rare cases, when the differential diagnosis from other diseases may become extremely difficult. According to my experience two forms may be distinguished clinically, *viz.*, (a) the prexerosis and (b) the real white xerosis of the cornea. The former is far more frequent than the latter, at least in adults.

The three main symptoms of prexerosis, which I have described elsewhere, are (a) a slight loss of lustre of the cornea, (b) reduced sensibility and (c) the typical bacteriological finding of xerosis bacilli in the degenerated epithelial cells of the cornea usually in as great numbers as in a Bitot's spot. Sometimes the loss of lustre of the cornea is hardly recognised by the naked eye. In such cases either the characteristic exfoliation of corneal cell will be shown by the slit-lamp or the "drying-out-symptoms" will be present after keeping the cornea exposed for five to ten seconds by retracting the lids, when the cornea will lose its lustre entirely and become dry just as water evaporates on a hot iron. Curiously enough, frequently only certain areas of the cornea show the 'drying out-symptom' and that in a very irregular way, demonstrating that not all corneal epithelial cells are in the same stage of destruction. Prexerosis of the cornea may occur on an otherwise normal and pale eyeball, but it is often combined with Bitot's spot or with any other forms of xerosis of the eye-ball conjunctiva. Prexerosis may turn into real xerosis of the cornea or into keratomalacia, or it may disappear with total restitutio ad integrum in a short time under proper nourishment or under treatment with cod liver oil.

Real xerosis of the cornea of the same whiteness as Bitot's

spots or a little less is seen in three pictures : (a) white crescent of 2—3mm diameter within the upper or lower circumference of the cornea as a continuation of an extensive xerosis of the eyeball conjunctiva, (b) irregular whitish plaques of the cornea in connection with the limbus either in the palpebral fissure region of the cornea or in its lower half (I have seen cases, where the whole lower half of the cornea was completely white-xerotic) and (c), isolated, round or irregular islands in the centre of the cornea, which are not connected with the limbus. The sensibility of the cornea is always greatly reduced and the scraping from the plaques reveals many xerosis bacilli or pneumococci. In the stage of healing the plaques break up into several islands, which disappear in a way similar to the extensive xerosis of the bulbar conjuctiva.

IV. Keratomalacia

This is the last stage of vitamin. A deficiency in the eye of adults. It is a well known condition in infants and children. Keratomalacia in adults may be seen in India, however, in all forms and in almost every age, more common in males than the females. All possible consequences from a simple macula corneal leukoma adherens, partial or total staphyloma of the cornea with or without secondary glaucoma, up to blindness due to atrophy or phthisis of the eyeball may be found. A great percentage of the blindness at least in India may be attributed to keratomalacia. The disease is usually bilateral as in infants; but unilateral keratomalacia of adults is very frequently associated in the other eye with one or the other deficiency stages mentioned above. These cases demonstrate very clearly the connection of all these pictures although clinically they are so various. The only mention necessary about the clinical course is that the progression of keratomalacia in adults in most instances is not as quick as in infants.

All the other symptoms, so frequently met with in vitamin A deficiency disease in adults, may only be briefly summarized. Some of these need further observation and study, since it is not yet certain whether lack of vitamin. A can be held responsible for all of them or not. It is possible that lack of vitamin. C and D may play a part, blurring the clear picture of vitamin. A deficiency.

V. Pigmentation of the conjunctiva

In most of the cases in India this pecular pigmentation has been observed. The colour of the pigment is light brown, but the presence of many pigment dots may make the conjunctiva even quite black-brown. The pigmentation is always most

marked in the region of the semilunar fold and caruncle and from here extends first to the fornices and then to the bulbar and lid conjunctiva. The upper fornix is usually a little less pigmented than the lower. Histologically the pigment is found chiefly in the basal cell layer of the epithelium. This pigmentation occurs in both the mildest and the severest cases of vitamin. A deficiency and is a symptom often disappearing last of all. It is frequently associated with nothing but nightblindness and may even occur alone in rare cases.

VI. Meibomitis

This is very often met with in cases of vitamin. A deficiency. In my opinion the disease is here not primarily of inflammatory origin, but is caused by the inactivity of the Meibomian glands, similar to the inactivity in other glandular tissue in vitamin deficiency. This inactivity causes the fatty contents of the glands to be kept in the excretory ducts, irritating the glands themselves and the lid margin, which allow germs to enter into the glands and thus give rise to a secondary inflammation.

VII. Blepharites and Hordeolum

These are very common in vitamin A. deficiency cases. They are caused by the richness of bacteria in all parts of the eye, as I have shown elsewhere.

VIII. Decrease of tear fluid.

This is often noticed although only in advanced cases, and it increases the impression of dryness of the eye. The tear fluid is not only diminished by the decreased secretion on account of reduced sensibility of the conjunctiva and cornea, but also the tear gland itself gets atrophic in later stages as shown in animal experiments and also in extirpated human tear glands.

IX. Oedema and puffness of the lids.

This is found in advanced cases especially in those of long duration mainly of the upper lids, in accordance with the pasty, puffy face seen in many vitamin deficiency cases.

X. Comedones.

The presence of comedones is the last symptom in the neighhourhood of the eyes which may be mentioned. This symptom which is also seen in advanced cases, is very striking The comedones are also caused by the inactivity of the sebacious glands of the skin, through which the sebum stagnates in the excretory ducts and becomes oxidized by the open air.

All the necessary symptoms, mentioned above in paragraphs 6 to 10 disappear together with the other ocular symptoms by proper nourishment or by treatment with codliver oil.

SKIN-GRAFTING *

BY

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THE following simple technique for skin-grafting was used by me recently and the results were so remarkable that I like to recommend the procedure to those who contemplate doing the same.

In one patient who had an extensive burn of the third and fourth degrees involving the gleuteal regions, the whole of the thighs and the upper halves of the dorsal surfaces of both legs, two extensive raw granulating areas were left involving practically the whole of the dorsal surfaces of both thighs. As there were no islands of epithelium in the midst of these raw areas and also to prevent contraction and deformity due to large scars each leg was grafted twice. Another case of extensive lacerated wounds of the arm caused by machinery accident was also grafted by this method and on each of these occasions all the grafts implanted had 'taken' wholly without a single exception.

After all sepsis has subsided, the area to be grafted is prepared by dressing with warm sterile boracic fomentations changed about three or four times a day with a view to decreasing the discharge to a minimum. Where it is necessary to prevent excessive scar tissue and consequent impairment of movements it is good not to wait too long for preparing the area to be grafted. Slight sero-purulent discharge is not of much consequence.

On the day previous to the operation the donor area as well as the skin all round the area to be grafted is shaved and smeared with olive oil. After about an hour, all the oil is washed off by washing with soap, warm water and a soft brush two or three times. These areas are then thoroughly washed with methylated spirit and afterwards sterile water. Then the area to be grafted together with the surrounding skin as well as the above prepared donor area is wrapped with lint (two or three layers thick) wrung out of boiling water and bandaged. The olive oil removes all loose cuticle and dirt.

About two hours before the operation, on the next morning the donor area as well as the skin surrounding the area to be grafted are again washed with methylated spirit followed by sterile water and redressed with the same layers of lint (which were applied on the previous day) wrung out of boiling water. At this stage, the ulcer is gently rubbed with sterile water.

* Specially contributed to the Antiseptic.

At the time of the operation the sterile lint dressing over the ulcer is removed and the whole area is gently wiped with dry sterile gauze wrapped round the finger. It is important not to cause any bleeding by vigorous rubbing.

The dressing over the donor area is removed and a sterile towel is wrapped all round. Good anæsthesia is obtained by infiltration with novocaine 2% with adrenalin preceded by a preliminary injection of morphine (gr ½ in adults) one hour before the operation. Theirch's grafts about half an inch square are removed with a sharp razor. As the grafts are cut, they are at once removed over the razor to the granulating area. They are at once manipulated with two long flat pointed needles to undo any inversion etc. If this is not done at once before the blood gets dried up it is apt to be very difficult. The area is covered with the requried number of grafts and covered evenly with one or two folds of dry sterile gauze each fold consisting of about ten layers. Gauze strips little longer than the area to be grafted and projecting well on all sides ought to be sterilised beforehand. Now if the area is on a limb it is raised by an assistant. Over this dry gauze layer is applied elastoplast bandage in a spiral fashion, each layer covering the preceding one for about half its width. The approximate length of elastoplast should be cut previously and kept ready. The elastoplast is applied with moderate pressure. It is neither applied too loose nor too tight to cause marked œdema of the distal parts. It is very important not to disturb the grafts by pulling the elastoplast injudiciously. The elastoplast bandage should begin well below the area grafted and should end well above the same. Over the elastoplast a layer of cotton wool and finally an ordinary bandage is applied.

The patient is advised to avoid any trauma to the surface.

The donor area is conveniently dressed with one round of elastoplast directly applied without any gauze intervening. The donor area almost completely heals by the tenth day when the elastoplast is removed.

The dressing over the grafted area is removed on the seventh day. Indeed it may be removed even on the fifth day, when the grafts will be found to have taken 'en masse' as if they were stitched in position. After this they may be dressed with equal parts of glycerine and lotio rubra or even elastoplast may be directly wound over the area. The grafts grow rapidly and cover the whole wound.

Summary —

(1) If grafting is contemplated it should be undertaken early *i.e.* before much scar tissue forms.

(2) It is quite possible to successfully implant the grafts even if some slight discharge is present.

(3) It is not necessary to scrape the granulations but simple wiping away of any discharges and foreign substances such as cotton fibres etc. with dry sterile gauze just before the operation is all that is necessary. When the granulating area is very uneven scraping may be done one or two days beforehand but not just before the operation.

(4) No antiseptics of any kind are used.

(5) Application of elastoplast with moderate firmness, keeps the grafts in position and applies the necessary elastic pressure. It is important not to displace the grafts during the manipulations. In children probably this would be an ideal method and properly applied no splints or other appliances are necessary. The elastoplast also probably acts by improving the circulation of the limb.

(5) No special appliances or instruments are necessary.

(7) Elastoplast application also enhances the healing from the edges.

N.B.—On two former occasions I had done skin-grafting by employing marine sponge pressure but the results were not half as satisfactory.

My thanks are due to our visiting Medical Officer Dr. J. S. Abraham for permission to publish these references to cases.

THE SURGEON

Now he begins : his fiingers feel
The tiny burning bit of steel ;
They move, obedient to a star
Unseen by us ; his sure hands are
So swift that the swift hands of death
Are held ; there is one slender breath
Between the two so delicate
No calipers can measure it
Save those he holds. I think there is
No act so near to God as his.

—*Joseph Lesinsky*
Hygeia, June 1934.

SKIN-GRAFTING—N. K. NAIR.

Photograph taken nine weeks after skin grafting. Patient is standing with legs inverted.

Plate II. Multiple Keloids. Two following Boils and the rest spontaneous. (Courtesy. Dr. H. A. Maniar.)

Plate I. Keloid following burns. Note the claw like prolongations on the lesion over sternal region. (Courtesy. Dr. H. A. Maniar).

KELOIDS*

BY

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KELOIDS may be single or multiple. The tumour is well defined, raised or ovoid or of irregular shape or consists of rounded plaques. A characteristic feature which is, however, not constant is the claw-like prolongations (As in plate I), which spread from the central mass, into the surrounding skin.

The surface of a Keloid is smooth, often shining and rarely nodular. It may be white or red or purplish, the colour depending upon the presence of dilated vessels upon it. Grave deformity may occur at the muco-cutaneous junction and when situated at flexures the movements of the parts are impaired.

Keloids are often tender and the patient may complain of pain or burning or itching. Sometimes the pain is intense, but in other cases there are no subjective symptoms. Scar keloid may occur anywhere and when following a burn or scald may be of considerable extent.

In the idiopathic form the lesion is usually similar and the *trunk* is affected in majority of cases (As in plate 11). The Keloid is of moderate size with a well-defined margin, discoid, ovoid (As in the picture) or irregular in shape, with claw-like prolongations as in the scar variety. Tenderness and pain are also common.

After reaching a certain size, the Keloid remains stationary or spreads slowly or it may undergo spontaneous resolution frequently, in young subjects. Malignant change may occur though this is rare.

Keloid has to be differentiated from hypertrophic scar, the latter being limited to the original scar area,. while the Keloid spreads beyond it. There is no importance in differentiating between a scar Keloid and spontaneous type.

Treatment: Keloids should not be excised. Immediately after excision good results are seen but unfortunately they usually recur

The most satisfactory results are obtained via X-Rays or Radium Therapy. In extensive keloids, primary excision may be done and then the X-Rays or radium may be used. Injections of Thiosinamine and of Fibrolysin may also be used but are not as satisfactory as X-Rays and Radium.

* Specially contributed to the Antiseptic,

In the problem of etiology, besides the popular idea viz that it follows wounds, burns and scalds, incisions (Surgical) etc., Keloids have been noticed after application of caustics, blistering, bites of mosquitoes, acne vulgaris, vaccination, Hypodermic injections, tatooing, perforation of lobules of the ear for ear-rings, syphilitic ulcers, herpes Zoster etc.

Spontaneous cases do occur but are rare and here still, it is difficult to exclude slight traumatism.

There has always been a controversy regarding this subject as to whether the keloids fall in the domains of Surgery or Dermatology. For the purpose of advice the cases go to both, but the therapeutics of the same have been passed on to a Radiologist.

My thanks are due to Major, S. L. Bhatia for the facilities of photography at the Physiology School.

CLINICAL ASTHMA: ITS PROBLEMS AND THEIR ORIENTATION *

BY

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ASTHMA is one of the most fascinating of diseases, as Professor Wild and Walfar Howarth would put it, to every one, except of course the patient. The subject is particularly of special interest at present as no other malady within recent years is attacked in all its aspects by scientists towards a rational therapeusis and understanding of the underlying disease process, though as a clinical entity it stands hoary and has claimed the attention of the ancient Greeks, Romans and Indians. The literature on the subject, both ancient and modern is therefore in plenty but the general practitioner is naturally bewildered by the maze of contrary and at times contradictory data placed before him, on a cursory perusal of the same.

Asthma—a symptom complex

G. H. Oriel, E. P. Poulton, Samuel West, G. S. Scott, D. W. C. Jones & R. A. Young among others would admit the usage of the term Asthma for a symptom complex, applied to the paroxysmal dyspnoeic state of affairs in the smaller Bronchi, which hinders the normal free exchange of air between the larger Bronchi and the lung alveoli that is met with under such widely varying clinical conditions, as in certain organic disorders of the

* Specially contributed to the Antiseptic.

lungs heart, kidneys, and alimentary tract or even as a pure Neurosis, in short, in disorders of any of the great physiological systems.

But L. J. Witts would appear to break new ground when he postulates that there is no justification in all or any of the varied attempts, to split a definite clinical entity like Asthma into types like Allergic Asthma including Animal Asthma, Bronchial Asthma, or Nasal Asthma on the grounds that the nature of the paroxysm, the response to treatment and the frequency of inheritance to protein hypersensitiveness are the same in all the categories.

He avers that the theory of asthmogenesis in a hereditary allergic dystrophy is unacceptable, at any rate imperfect, on the ground mainly that Hypersensitiveness to foreign proteins whether organic or otherwise and respiratory disorders are of phenomenally high prevalence as against firstly; of its meagre incidence of about 1 % only in the general population and secondly, its occurrence at times, in the absence of either of these; that though it is tempting to see the whole pathology of the disease in the coincidence of a general allergic factor with a local respiratory lesion, it does not explain the ebb and flow of the biologic tides in Asthma, which appear to be due to variations in the internal milieu of the organism, rather than any change in the external environment or in the respiratory tract itself, accepting disease process, as conceived by J. S. Haldane and H. Rolleston as the mental picture of the manifest reactions of a living organism, in response to harmful factors, whether derived from outside the body or arising within, that in none of the great physiologic systems or Blood pressure or Bodily confirmation do asthmatics differ during their quiescent stage from the general population, that the beginning of an asthmatic attack being shrouded in mystery, the forces that contributed to it would seem to be operating for all subsequent attacks and therefore merit discovery.

Lastly he stands alone when he elects to remain unconvinced, that disorders of the alimentary tract have any fundamental connection with Asthma on the grounds firstly that Vanzant, Knott, Oriel and Nitts have found the fractional test meals of the adult asthmatics to be within normal limits; secondly, there is no lack of resistance to enter current infections in asthmatics, as in other proven toxaemia, hepatic, and Nephritic; thirdly, there is no clinical evidence of an abnormal incidence of gastro intestinal disease among asthmatics, though he would admit that an attack is inhibited by purgatives; fourthly, F. A. Knotts had failed to

detect by microscopic and bacteriologic analysis of asthamtic stools any specific change therein. Certain objections to this hypothesis, seem to be called for in respect to this subject of pulmonary *versus* alimentary tracts.

1. If it is remembered that the respiratory tract is a development from the Laryngo tracheal grove, in the Ventral wall of the pharynx, that its Epithelial lining is entodermal, the close correlation of dysfunction of gastro intestinal and respiratory tracts through a haemostatic blood medium as in Asthma, incipient and advanced Phthisis,influenza etc. becomes evident. J. P. Pavlov's researches on the work of the digestive glands have brought out conclusively that the work of the digestive canal, in every single case, like everything else in Nature, is elaborately planned, beautifully executed, and especially adapted with the utmost delicacy and precision to the task on hand *i.e.*, to the requirements of the food ingested. That the wonderfully prepared food particles which are entirely different in appearance and chemical composition from the food taken in, are carried from the bowel, as a stream of predigested food to the individual cells which in their billions taste the food carried, absorb some, reject some and excrete that part of the absorbed food which they find unsuitable, together with such excreta of their own, that are more or less poisonous to themselves.

2. It has been demonstrated by Voit and Hermann independently that an intestinal loop, that is emptied and separated from the rest of the bowel contains a few days later, material identical with faeces consisting of succus entericus, desquamated epithelial cells, and bacteria. In this normal shedding of epithelial cells, the Vitalistic school of physiologists would regard the intestinal and respiratory tracts, beside the colon and the skin, as much emunctory in function as the kidneys.

3. When the mucin production is tending to be excessive, with intent to eliminate the offending material either of exogenous or endogenous origin, like all other compensatory physiologic reactions, ultimately it proves to be harmful in that in such mucous diathesis, the surface area of the epithelial cells for physiologic function is reduced beside the invaluable drain of proteins that the body could ill afford, in the animal economy, tending therefore to neurasthenia and psychasthenia. Sir Thomas Horder would hold mucous Bronchitis to be intermediate in position between Asthma and a true infective type of bronchitis. For as L. J. Witts has rightly concluded it is more common for organic lesions to follow than to precede Asthma and the quality

of Asthma changes as years go by, assuming a more purely respiratory character. Cases of Mucous diathesis whether involving the respiratory or alimentary tracts, are in Sir Thomas Horder's opinion difficult to treat.

4. Sir James Mackenzie, a general practitioner and an all round physician of the first rank, observes: "When one reflects the complete failure which has resulted from the many attempts to understand the true nature of consumption and its remedy, a view so reasonable as Lanes' auto-intoxication merits a very thorough investigation." Dr. Charles Sabourin of Durtal Sanatorium, in his rational treatment of Pulmonary Tuberculosis emphasizes the importance of chronic appendicular dyspepsia in dealing with suspicious apical pulmonary signs; and that patients begin to improve and master their discrete apical pulmonary lesions, only from the day that their bowels have been re-educated and their functions restored to normal regularity.

While the pendulum has been oscillating between the inhalation theory of Tuberculosis adumbrated by Koch and supported more recently by MacFayden, Cobbett and Griffith and the Imbibition theory propounded by Von Behring, Nocard, Ravenal Aufrecht, and experimentally demonstrated by Calmette and Guerin in France, Dr. Lawrenson Brown of Trudean sanatorium and H. L. Sampson are strongly of opinion that tuberculosis of the lungs starts not in the lungs, but in the intestine, that all current theories of inhalation and the germs promptly attacking the lungs are mistaken,that the number of Tubercle Bacilli present in the sputum and therefore swallowed into the bowel is of less importance, than their prolonged contact with the intestinal mucous membranes, for the incidence of intestinal Tuberculosis, with the human strain of infection, that indiscretions in diet set up a catarrhal condition of the mucous membrane and so favour larger entry and local inflammation, as in experimental animals it has been proved by Ravenal that Tubercle Bacilli are constantly passing through the walls of the intact and normal intestines.

5. It has to be borne in mind that fatal cases are met with, though rare, as direct result of ingestion of 'Pansupari' which usually excites in the susceptibles an anxiety syndrome, a momentary giddiness and sweating. It is due to an œsophageal spasm, brought on by motor dysfunction of its muscularis mucosa which fails to propel the onward passage of the bolus that is intrinsically sticky, and therefore excites violent peristaltic waves. This oesophageal spasm expresses itself symptomatically, through the pulmonary branch of the vagus as a gasp for breath. This spasm

is controlled by an oily intake with intent to lubricate the passage of the offending material is slowly washed down by more labile medium like sips of water when the alarming symptoms of giddiness and asphyxial feeling are effectively annihilated, till then the chest continuing to remain in the respiratory phase, as in Asthma. A physiologic mechanism that restores impaired function and therefore desirable at the beginning tends ultimately to fail and rather positively harmful as in the reported fatal cases.

6. The loss of function of gastric mucosa to manufacture the Hcl is a symptom. It may manifest itself due to a simple achylia gastrica with its local symptoms, or into true Addisonian anaemia or sprue or into subacute combined degeneration or Rheumatoid arthritis. These different clinical entities are not interdependent as the source of one being a sequel to another, rather they would seem to be the results of one common disease process according to its seat of election demonstrating the great law, that there is no uniformity in nature which is always productive of varieties, while laboratories would aim at discerning the one process-applicable to all diseases.

Speaking about meteorological factors that might affect health, G. C. Simpson remarks that all the physical aspects of atmospheric electricity have no physiological significance. The accompanying hot and humid conditions to a thunderstorm favour the growth of Bacteria to sour milk, and an unpleasantness to all people alike.—the nervous strain is possibly due to the physical fear of thunder and lightning inducing hypoadrenalæmia. He avers, recent knowledge has shown that quantities of radio active matter in the atmosphere are likewise absolutely insignificant from the point of view of health.

But clinicians have always recorded the correlation of sprue to hot humid conditions and asthmatic changes with the vicissitudes of the weather. Sir James Barr observed that though the ultimate scientific explanation to this correlation of climate to disease may be changing, yet the importance of the climatic factor in the causation of disease remains as great as ever. Prof. Von. S. Leeuwen would resign the final prognosis of Asthma to the effects of climate, while assaying the final verdict of any line of treatment.

There are many who would agree with G. R. McRobert when he deplores the current deficient knowledge prevailing on the physiology of the gastro intestinal tract. The mechanistic school of physiologists would advance the theory that in humid climates

there is an increased distribution of blood to the skin at the expense of the splanchnic area, a state of affairs which if unduly prolonged is likely to induce an alimentary dysfunction.

It is highly probable that different individuals react differently to same toxic and external agencies according to the states of their bowel conditions, and a fluctuation in P. H. values of bowel contents, has been suggested for the variations in the disease manifestations, as also to the mutations of pathogenic bacteria, their pathogenicity altering with the culture medium that had long ago been demonstrated by Metchnikoff.

Dr. Herter would invite the attention of the profession to the fact that clinical experiences are not wanting in which two persons of approximately the same weight react differently to the same drug and do so regularly, which difference, due to a lack of accurate understanding is conveniently shelved under the terminology of an Idiosyncrasy. There is good reason for suspecting that quite similar to it, "allergins', whether bacterial, chemical or unorganised proteins, from either the gastro Intestinal or Respiratory tracts may lead to either local disturbances or by a fuller absorption through the systemic circulation, get up a metabolic dyscrasia and develop more remote consequences including disorders of the Nervous system, irrespective of its high insulation in the animal economy, that has been brought out by Wilfred Truther's researches. Thus, the transition from good health to disease would seem to be by a process of auto-intoxication or the Toxic idiopathies for want of a better expression, and rarely a sudden one, rather it is so slow and gradual, so insidous that the evanescent warning symptoms more often get slighted until great mischief has been wrought. This accounts for the biologic ebb and flow tides of Asthma, in the transient and mild cases, as in all other disease processes like sprue, pernicious anæmia etc, until it develops into such a well marked stage as to merit a posological label like Bronchitic, Nasal Nervous Asthma. It is therefore the make out of a long number of years of neglect and exhaustion of the innate endurance and vigour, probably dating from childhood.

7. Lastly that Asthma in the adult is frequently accompanied with flatulent dyspepsia and colon spasm has been observed by L. J. Witts as also that severe symptoms of toxaemia as manifestations of gastro intestinal allergy occur only in asthmatic juveniles who show definite evidence of disturbances in gastric secretions. Influenza, measles, Whooping cough, are a few of the diseases associated with both alimentary and pulmo-

nary disturbances that tend to make asthmatics worse or initiate asthma in a patient previously unaffected. It would therefore appear that all frank cases of capillary Branchitis, like vasomotor Rhinorrhoea, are potential asthmatics in contradistinction to acute lobar pneumonia, which effects a natural "fever therapy" in Asthma. S. G. Scott regards that many asthmatics give a history of abdominal discomfort or indigestion which disappears under radiation, by exciting looseness of bowls during that course.

The allergic theory of Asthmogenesis

It was Von Pirquet in 1907 who first proposed the term allergic in clinical medicine to a qualitative reaction to his skin test with tuberculin essentially a foreign protein. Frank Coke's researches have shown the multiplicity of antigenic factors possibly at work in a given asthmatic. Prof. Von Storm Leeuwen and several others have proved that most asthmatics, do have a positive von pirquet reaction of even considerable intensity the percentages of the sick standing to benefit by this tuberculin treatment is assayed at 70%, a much higher figure than the results obtained at the Brompton Hospital for frank tubercular infections. Differences of opinion still exist about the choice and suitability of tuberculin therapy to Asthma, as in Phthisis. It has its own limitations in that as in all allergics, the benefits are diminished or abolished by two factors, which have a similar influence on all the known methods of nonspecific desensitization, as and by injections with peptone, sulphur, gold and T. A. B. firstly by the as yet undetermined influence of atmospheric conditions, and secondly by the hygienic environment of the patient both during and after treatment.

The rationale of the nonspecific desensitization is sought to be made out in Reckmann's researches that rabbits, sensitized to egg protein, when given protein shock with T. A. B. injection, throw off their sessile egg precipitins fixed up to their tissue cells, (which re-appear in the blood stream), by a process imitative of active immunity but different therefrom, in that the surface disturbances of the cells induced thereby are of very short duration to manufacture the biologic driving substance, and therefore it allows of refixing of the precipitins back to themselves. It is suggested that the mineral elements of the cell are possibly not sufficiently participating in desensitizations.

That the asthmogenic disease process is not invariably or necessarily allergic is gaining ground. For, all asthmatics do not give positive skin tests either to their own or to that of other's

urinary proteose isolated by Oriel and Barker during the paroxysms of Asthma. Culpin looks upon the allergic phenomenon as the freak of a biochemical Puck. The real inter-relation of the psychic and allergic factors would entail extensive research into the Vegetative Nervous system as the reaction of the body to psychical factors of disease depends largely on the pattern of the individual.

Woodhouse found that the substance found in the Hair of animals, and capable of producing positive cutaneous tests in the susceptibles, is due to protein isolated from the dandruff of the animal skin, but Freeman has shown that slight reaction does exist also to flesh, serum, faeces and nasal mucus, in those sensitive to the dandruff of animals.

G. Bray Freeman, Oriel and J. H. Burn would ultimately regard the skin tests as allergic to the patient's own bruised tissues:—A toxic idiopathy, to the products of the extrinsic factor usually incriminated, possibly histamine or like other waste products of the body metabolism. J. H. Burn would go so far as to suggest that asthma is only a hypoadrenalaemia that its low incidence like myxœdema, diabetes, in the general population, is due to the fewer cases of hypofunctions of the appropriate endocrine glands, and the resulting subminimal circulations of respective secretions.

Most children even with strongly positive Dick reaction are insensitive to endotoxin whereas adults, especially those prone to tonsillitis tend to be highly sensitive to the endotoxin irrespective of their response to dick toxin. Endotoxin is relatively heat stable and unaffected by antitoxin. It is not yet settled whether this endotoxin reaction is an allergic Test or a reliable test of immunity to invasion.

A Toxic Idiopathy or a Metabolic dyscrasia as the pathogenesis of Asthma

Chandler Walker found that multiple sensitization is uncommon in cases which begin later than the age of 10. Skin reactions indicative of multiple sensitization do not necessarily indicate there is, at the actual moment all the factors at work, although each is a potential cause and merits separate consideration in determining the specific desensitization. A. F. Wright had remarked, there is an inherent inertia or refractoriness, in Vasomotor Neurosis, to the process of producing tissue resistance to unorganised proteins in contra distinction to a temporary inertia or loss of some power to microbic infection.

By infection is meant a mere successful implantation of the

organism in the host cells. The bacterial antigens loosely bound to them produce the slow and increased permeability of host cells the immunogens of Ferry and Fisher : The unsuspected pathological processes locally occurring help to produce abnormal metabolites which gaining the systemic circulation give rise to spasmodic affections often possibly escaping the detoxicating action of the liver cells and the general lowering of resistance consequentially, favouring secondary infections. It would account for a mere physical and non inflammatory turgescence of mucous membranes whether ectodermal as in vasomotor Rhinorrhoea or entodermal as in the intestines and lower respiratory tracts like congested liver, atoniagastrica or a mere distension of stomach with food or quite independently of it flatulent dyspepsias, or the mere subjugation by vicious habits of physiological reflexes, resulting in colonic stasis and dyschezia, to manifest themselves in spasmodic affections, in general, of which one such is the Asthmatic syndrome. The value of pituitrin, an ectodermal product in these cases is particularly high. The theory of an irritable Bronchial centre or the vagotonia of Eppinger and Hess or Vasomotor Neurosis in asthma pathology postulated by Traube and Weber in functional pathology merge into this toxic idiopathic group doctrinised by John Freeman, a heterogeneous group of general metabolic disturbances, including endocrine imbalance.

This toxic idiopathy, as has been detailed above may be either acquired or even inherited. It may manifest itself in different members of the family as Asthma, Hayfever, or amenorrhoea, insanity, migraine, epilepsy, local digestive disturbances, depending upon the site of prominence in their acquisition of a probable irritability or a possible instability in their physiological systems. Bree in 1797 opined, habit and perceptions of the mind, exciting by medium of sensations, motions of the body may cause asthma, that the emotions of mind *per se* may return and cause asthma. The sight of an artificial rose, grief and love are instanced. It is in agreement with the conceptions of the conditioned reflexes of Pavlov. Bree advised large doses of iron in the correction of asthma. Trousseau (1801—1867) used to get asthmatic fits. He thought migraine, eczema, gout, rheumatism haemorrhoids and gravel were some of the complaints that might be replaced by asthma. Prof. Karl Hensen's expression, that there is an ever renewed intrusion of "allergins" into the organism, which effected mild illness, when the body is being prepared by certain psychical experiences, tally with the theory

of toxic idiopathy, though he would tend like Dr. Culpin to attach an overdue importance to the personal factor.

Prof. Von. S. Leeuwen, has observed, that the beneficial effects of treatment, manifest in the respite from asthmatic attacks, last much longer than the decrease in Eosinophilia, so that the two phenomena although often running parallel are not necessarily linked together or dependent upon a common cause. An Eosinophilia occurs in a variety of irritative lesions of the skin or gastro-intestinal tracts parasitic or otherwise, the earlier reappearance of eosinophilia to an asthmatic attack is *a fortiori* reason for believing in the occurrence of Physiological changes, possibly of increased output of endocrine into circulation as pituitrin and insulin therapy has been attended with eosinophilia as observed by R. D. Lawrence.

The Neurosis theory of Asthma

A. F. Hurst in no ambigious terms observed, that his 2nd attack of asthma was induced by auto suggestion during his 2nd visit to Salisbury, that such and other reported cases of Trousseau apparently suggest the hysterical aspect of disease processes, can never occur in the absence of a physical basis like abnormal vagal centre to effect the bronchial spasms, the low uric acid content of the blood and the failure in purin metabolism, that psychotherapy is necessary only so far as to enable the patient to take a less hopeless view as to his chances of complete recovery by an explanation of the mechanism involved which has been well established by the researches of Brodie and Dixon. J. B. Christopherson throws his weight of opinion distinctly to one side of a controversy that was raised by Dr. Siegel as to the unilateralism or bilateralism of asthma when he says, that the 2 phases of antagonistic nerve impulses of the vagus and the sympathetic governing the phenomena of Asthma do not necessarily involve the whole lung but may be confined in their action to a part of a lobe, or to a single bronchus or to an isolated area that in the study of ordinary cases of Asthma, in its quiescent stage, the free entry of lipoidal into the whole bronchial tree marks the phase of a sympathetic action, being responsible for the relaxation of Bronchial musculature and so to the opening of the bronchioles, that in some cases in their natural therapeusis and possibly by the overaction of the sympathetic, similar to the anaemic waves turning out more Hb than corpuscles, it causes a permanent overstretching of the Bronchiolar tissues attended with bleeding and varicosity. These are possibly the type of cases that are

reported as developing on to phthisis of Peri Bronchial type with symptoms of Haemoptysis, being further misguided by the exaggerated shadows due to blood vessels and lymphatics appearing in the films though the possibilty of a frank Tuberculosis of other types, in the lungs by a superadded infection cannot be gainsaid.

The deficiency phase of sympathetic adrenalin system resulting in hypoadrenalaemia or the physiologic failure to use it at the neuromuscular synapsis due to an undetermined cause would account for the manifestation of the antagonistic phase of the physiologic balance through the cranial sympathetic, in the calibre of the lower respiratory tracts and enfeebled circulation. Towards an emergency relief of the asphyxial process thus resulting through the overaction of the vagal terminals, accessory muscles of respiration are brought into play with intent to increase vital capacity and to manufacture abundantly either fresh adrenalin, from its precursors or to release it from its storage much in the same way as a man struck with a sudden depressive emotions of fear and insult, would nerve himself deliberately, either to run away or fight in rage-purely muscular efforts.

In anaphylactic shock and other depressed emotional states there is a pallor of the face and a leucopenia. When successfully combated by either adrenalin injection or the natural efforts in rage there is a return of the Eosinophilia and an adaptation to the exigencies to preserve the constancy of the internal environment. (Cannon). The skeletal muscles are possibly called upon to function in an attack of asthma, to mobilise the blood sugar, to benefit the fatigued muscles of the day towards maintenance of internal heat, when the atmospheric temperature that drops down by night demands the organism to maintain its uniform temperature. The earlier return, in the quiescent stage of asthmatics of eosinophilia is possibly an index of the intrinsic recuperative metabolic activity, towards maintenance of a physiological tone of body by manufacture of increased endocrine secretions. Thus exercise would account far more than the rarefied and purer air of high altitudes alleged to be beneficial to certain class of asthmatics only to such, who would pleasantly indulge in walking which is no mean strenuous exercise bereft of the premature fatigue attendant on the plains. Excessive venery would in adult asthma contribute by its own exhaustion to the maintenance of this refractoriness or inherent inertia and asthma characteristic of the disease. Cannon and Merkin independently have adduced experimental evidence, that total sympathectomy in laboratory animals, bring out a great reduction in their ability to do work to 35% only owing to the absence of internal adaptive changes, and in the females a total absence of maternal care to suckle their offspring and that in such animals there is a much greater frequency and prominence of shivering which is the only resource left to them in the absence of willing exercises, to protect the animals from a deep drop of temperature.

E. F. Buzzard found suspicious changes in the medulla in two cases of uraemia and is not satisfied with the theory of release of cerebral control over lower centres for the clinical manifestation of asthma—the biochemical Puck—for in sleep and slighter degrees of cerebral depression cheyene stokes breathing except in children does not occur but only when the depression is deep enough to affect the lower centres also.

But Samuel West, from the similarity of Asthma and Epilepsis in their periodicity, familial incidence, the prodromal symptoms and skeletal muscle spasms, absence of gross pathological lesions on post mortems would tend to regard asthma not as disease, nosologically of the medullary respiratory centre, but of higher co-ordinated centres, in close relation with the centres of volitional action and therefore presumably local. Dr. Beugelman's traumatic types of Asthma, from injury to Brain, by flows, falls, shock or to influence of cold and emotional conditions may apparently lend colour and weight to this psychic theory of Thomas Willis first established in 1680 and elaborated by William Cullen, Flover, Hyde Salter and accepted in more recent times by Clifferd Albutt, G. A. Gibson, Parkes Weber among others.

L. G. Witts observes recognisable diseases of ductless glands is uncommon in Asthma and that such lesions as do occur are those of deficiency and not of excess, that asthma improves in pregnancy where the activity of all ductless glands is enhanced.

The Modern trend of opinion is to regard Asthma as a pulmonary symptom, in a disease essentially of the vegetative Nervous system subserved by the Endocrines. The importance of a normal phsiologically functioning alimentary tract towards a maintenance of an endocrine balance becomes self evident. The study of Eosinophilia to rise with Insulin, Pituitrin and Adrenalin administration, made by R. D. Lawrence would lend support to this conclusion and J. H. Burn would definitely put down the whole disease process to Hypoadrenalæmia.

Treatment: its Principles and Practice

As Samual West had observed no single theory is entirely adequate for an unqualified acceptance to explain a symptom like Asthma that is analagous to the epilepsies in the multiplicity of its causation. E. T. Freeman observes that in the same patient, sometimes, under same conditions, the results vary, in attempts at desensitization,while Sir. William H. Willcox observes sensitization might easily result from incorrect uses of biotherapy and harm instead of good result therefrom. The exhibition of minerals in current practice during and after the abatement of Asthmatic attacks and the explanations underlying the toxic by-effects of radiation, in itself a palliative therapeutic measure in Asthma would lend support to a plea for a wider and fuller recognition of the value of minerals in the cure of asthma. Hurst makes mention of the value of mercury in cardiospasms or achalasia of the cardia. It is a time-honoured Cholagogue purgative and a decongestive of the entire portal system. The value of the Arsenic in asthenia, and as a blood alterative, especially exhibited during a very clean and absorptive bowel condition so as to enable the absorbed arsenic again to be eliminated into the intestinal tract is a time-tested clinical observation. Bree gives sanction for the heavy dosage of iron. Calcium is a well known vagal sedative, in all vaso motor affections. A. T. Todd speaks well of its exhibition in Asthma. Prof. Leeuwen claims good palliative results with the use of sulphur. Gold has been recommended in Spanish circles; such nonspecific desensitizations depend for their success on the severity of reaction induced as evidenced in the fever, that could be comfortably borne by the patient. Diathermy is a valuable adjunct to recalcitrant cases. (George Bray).

Diet:—Medical science can obviously effect a cure only by dealing with fundamental cause and not by tinkering with one of its most noticeable symptoms. The importance of diet and exercise cannot be overestimated in a disease like Asthma. Vegetables such as are found to induce a lowering of tissue metabolism like those of cucurbitacae are to be withheld; as also purin rich subtances; coffee as a tissue stimulant towards enhanced purin metabolism is advisable. Tea in moderation and well prepared is permissible but the astringent taste of tea indulged in by the poorer classes, that A. F. Hurst makes mention of, is positively harmful. Carbohydrate helped by insulin therapy towards body build is especially indicated. An antidyspeptic treatment in the intervals of attacks is urgently called for. J. E. Barker would appeal to every patient in his own characteristic force that the

body is not a fortuitous collection of organs and structures each liable to some special diseases but a single entity, that micro-organisms of disease are universal but disease is not universal, that an intelligent practice of medicine lies in a plain human knowledge of plain human disease, that the character of the microbic inhabitants swarming in our body depends on their nutrition, as attested to not only by laboratory methods but by a study of disease of captive animals But it is humiliating to quote him when he says: "It is a pity that the supreme importance of food and exercise is not sufficiently studied by the medical profession which largely wastes its time by hunting for the obscure without interesting itself in the obvious". The Immunologist has largely helped towards present day understanding of the disease process. The swing of the pendulum has drifted to the constitutional aspects whose elements escape the microscope for their proper understanding but are rather tending to invoke the aid of physical chemistry and the electronic theory of life and disease process advocated by Macdonaugh and August Lumiere. Velvet Beans and such others conducive to a liberal supply of Tyrosine towards elaboration of Adrenalin in the system is advocated by J. H. Burn till the physiological precursors of adrenalin are discovered which it is hoped will be an effective check to the recurrence of asthmatic attacks.

A. F. Hurst remarks much benefit can be derived by resting for half hour before the evening meal. Limitation of NaCl would seem advisable. F. G. Crookshank advises 2 gr. pallets of Pituitary whole gland in Asthma as a result of which asthmatics pass more urine and bowels act more regularly without unpleasant effects and rendering the occurrence of severe paroxysms, and the necessary self-administration of Adrenalin, infrequent.

The Management of acute attacks:—E. P. Poulton, and A. F. Hirst are emphatic in their assertions that respiratory fumigation by burning any of the patented products, however beneficial and expedient is positively harmful in setting up a vicious circle and a predisposition to further microbic infections of the respiratory tract.

I. J. Perkins observed that when catarrh is constant, vaccines are more efficacious in relieving such symptoms as cough or spasm, than in curing the Bronchitic condition, usually secondary to some chronic-pre-existing disease of the upper respiratory tract or elsewhere, as obesity or overfeeding.

Hyla Greves speaks highly of dry cupping of bases in acute and sub-acute types of well marked bronchitic types of cases.

Ammonium chloride and Potassium bicarbonate would be a detoxicating agent and an adjunct towards elimination of Nacl and water of the system, that is observed in the passage of pale limpid urine at the end of a paroxysm, whose biological actions can be represented as hereunder:

x + (Nacl)+(H^2Co^3) = Hxcl+($NaHCo^3$). where x is the organic toxin fixed as non toxic.

Second stage of process: K.H Co^3 + NH^4cl = NH^3. H^2Co^3 + Kcl-Kcl replaces NAcl of tissues.

The role of the Rhinologist in the treatment of Asthma:— Since France's introduction of cauterization of sensitive points in Nasal mucosa in 1902 much experience has been gathered and the consensus of opinion would tend to be, as observed by Von. S. Leeuwen G. W. Bray, W. Howarth, that operations on the nose for the asthmatic symptom or a Vasomotor Rhinorrhœa as a prelude thereto, are illogical and sometimes disastrous, unless other local indications are present for active surgical interference, though it is still extensively practised in America and France.

The administration of Evipan, Aspirin and Sera to asthmatics is attended with alarming results. Ephedrine in well developed cases of asthma would seem to be next to useless among adults, a view that is corroborated by L. J. Witts, G. W. Bray, and S. Crown. Cases of uræmic asthma and cardiac asthma require the appropriate treatment directed to underlying conditions. Neither Ephedrine nor Pseudo Ephedrine, if continuously administered will prevent attacks of asthma, unless appropriate constitutional treatment is effectively instituted. As Sydenham doctrinised, a chronic disease requires a Chronic treatment for its eradication in the sense of a prolonged treatment.

Conclusion.

An attempt is sought to be made to give the busy general practitioner a comprehensive but concise view of what seems to the writer from his clinical experience a rational outlook of the whole subject of asthma. It cannot be over-emphasized of the need for imparting an adequate constitutional treatment, in between the attacks, rather than allowing the patient to get himself 'quacked' with any advertised nostrums without any heed for a physiologic living. The treatment is entirely individualistic and prognosis, by modern methods of treatment is good enough, though as Frank Coke had observed, there will never be any one form of treatment which is effective in all cases of asthma, to render its prognosis very rosy or bright.

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Cases and Comments

A REPORT ON TWO CASES

BY

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Case I

On the 12th of July, a Teli woman aged 48 was admitted to the Mission Hospital, Jalna, suffering from a greatly enlarged abdomen due to the presence of fluid. The history was that for some 15 years she had been tapped at intervals and many pints of fluid withdrawn on each occasion.

On examination the case appeared to be one of ordinary ascites. There was nothing special to note except the huge abdomen and general emaciation; neither the spleen nor the liver could be felt, and there was no evidence of Ovarian cyst. She was tapped again and twenty seven pints of fluid withdrawn. She was then re-examined but nothing abnormal could be felt. A P. V. however was not done. It was decided to try a Talma Morrison operation. Two days later under general anæsthesia a mid-line incision was made and the remaining fluid mopped out. It was then noticed that there was a round lobulated tumour in the pelvis about five inches in diameter. Near the top of the tumour there was a hole about the size of an eight anna piece and out through this, every few seconds, fluid came in small gushes. The tumour was removed without any serious difficulty, and also a cystic growth of the omentum which had been grafted on, presumably, from the original disease. The abdomen after again being mopped out was closed. The patient made a good recovery and now a year later is in excellent condition with no return of the "ascites".

The tumour had an outer rind half an inch thick; inside it was loculated and contained a quantity of thick jelly-like fluid and some papillary outgrowths in addition to the watery fluid. It was a multilocular cyst adenoma of the ovary but it had not attained any great size owing presumably to early rupture. Such tumours on rupture may give rise to a condition of pseudo myxoma peritonei but in this case there was no evidence of any such condition. The free fluid was thin and watery and there were no stringy viscid tags.

The point to be learned is that an "ordinary case of ascites" may be something quite different and something which may be cured by operation.

Case II

The second case I should like to report is that of a Parsi boy aged seven years who was admitted to our hospital on the 21st April 1935. The history was that at 2 p.m. on that day he had fallen off a bed and bruised the *left* side of his head. He was stunned for the moment and then recovered and was all right for about two hours. He was just going to have a bath when his legs began to twitch and this was later followed by a generalised convulsion. When he was admitted at 6 p.m. he was in a semi-conscious condition and the moment he was put into bed a convulsion occurred which starting in his *left* leg spread all over the body. A provisional diagnosis of middle meningeal hæmorrhage was made and immediate operation advised. Fifteen to twenty minutes later he was on the table and by this time he appeared almost lifeless. Breathing was shallow, almost imperceptible, arms and legs were paralysed and both pupils widely dilated and fixed. There was sign of bruising over the left temporal bone but no evidence of fracture but as twitching had begun in the *left* leg it was surmised that the bleeding causing compression was on the *right* side due to damage by contre-coup. The boy being unconscious it was decided to dispense with an anæsthetic but as the incision caused some restlessness light chloroform anæsthesia had to be given.

Operation

A semi-circular flap of skin containing temporal muscle was rapidly turned down on the right side and intestinal forceps clamped across the base to prevent bleeding. A circular piece of bone was then removed by the trephine and the dura exposed. No bleeding however was observed and the question arose as to whether the damage was on the left side after all. However on incising the dura the wound was at once filled with blood. By means of rongeur forceps the opening in the bone was enlarged and it was then observed that blood was escaping from one of the cerebral vessels on the surface of the brain. An attempt was made to ligate the vessel but it ended in failure as no sooner was gentle pressure removed than the area became covered with blood so that the bleeding point could not be seen. Adrenalin solution 1: 1000 was then tried—about 30 minims being allowed to drop on the affected area and almost at once the hæmorrhage stopped. I should explain that we have no special brain instruments, silver clips, or electrical apparatus. The chloroform was witheld and in a few minutes the boy started to move his legs and cry. The pupils now reacted to light. The dura could not be stitched owing

to retraction but the piece of trephined bone, meanwhile in saline, was gently put back into position and the muscle and skin sutured in layers. The boy was then returned to bed where after a few minutes he recovered his senses and moved his limbs about in a normal fashion. Bromide was given to control restlessness.

All went well for three drys and then the temperature suddenly shot up to 103 degrees. Meningitis was suspected but there was no complaint of headache. The temperature came down somewhat only to rise again the next day but to the relief of all an eruption of chicken-pox now appeared. Surely an unusual complication? After this the temperature came to normal and on the eighth day after admission he was discharged with the wound quite healed. There have been no complications since then. The trephined piece of bone has grafted well and the remaining gap in the skull is well covered in by fibrous tissue so that practically no compressible part is left.

The interesting features are that:

(1) The injury did not appear to be severe but symptoms resembling middle meningeal hæmorrhage appeared after a lucid interval.

(2) Operation on the side opposite to the injury revealed subdural and not extradural hæmorrhage.

(3) The disconcerting but harmless complication of chicken-pox. A sister had an attack two or three weeks previously.

A lumbar puncture might have given information but it was omitted because the condition of the boy was so bad and the history apparently so typical of middle meningeal hæmorrhage. I believe he would certainly have died if operation had been delayed and no doubt one of the chief factors which brought about rapid recovery was the relief of the œdema of the brain by a considerable loss of cerebro spinal fluid. For a further twenty four hours cerebro spinal fluid oozed out into the dressings but no harm resulted whatsoever, in fact, it was beneficial for not even a headache was complained of. A case such as this is reported in order:

(1) To urge practitioners to send any case of head injury showing brain symptoms at once to the nearest hospital where operation may be performed.

(2) To show that patients with a *subdural* hæmorrhage may have a "lucid interval" after the injury.

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Editorial

DIET OF PATIENTS IN GOVERNMENT HOSPITALS IN MADRAS

We understand that the Government of Madras have recently appointed Col. H. G. Dyer as Special Officer for a period of one year to effect economy and retrenchment in the Government Medical Institutions in the City of Madras, including the King Institute, Guindy. Col. Dyer has come with high credentials from Bombay, having effected, we are told, nearly a saving of one lakh of rupees in the J. J. Hospital, to which he was appointed, Lay Secretary by the Bombay Government in 1930, with the sole object of effecting economy in diet, medicines, contingencies &c: He is to receive a salary of Rs. 750 per month plus Rs. 100 house-rent allowance, plus, Rs. 75 carriage allowance, if he maintains a motor car. While we have nothing to say personally against the officer, we fail to appreciate the propriety on the part of the Government of Madras, in importing an European Officer from Bombay, who is totally ignorant of the dietetic habits, social customs and economic conditions of Madras, to interfere in a matter of life and death, as that of a patient in a Hospital is, in preference to an Indian and a Madrasee. We trust, however, that Col. Dyer will carefully study local conditions before he begins to operate with his axe, lest anything that might be done hap-hazardly and in a spirit of excessive zeal and enthusiasm might go to jeopardize the health and comfort of the poor patients struggling for existence in the hospitals.

We had often held that the one thing that should not be

subjected to curtailment in a hospital was the patient's diet. Diet is the prime factor in hastening cures and medical men are the best judges to prescribe proper diet. Dietetics is a fast growing Science and to try to reduce the diet of patients to a mathematical formula in the name of economy, without any heed being paid to the human element involved in it, is to say the least of it, inhuman. A well-balanced nutritious diet for convalescents is highly desirable and a standard diet, for vegetarians and non-vegetarians separately may be formulated but quantities may vary according to individual constitutions. Where there is the chance of one man being overfed, there is the likelihood of another being starved, if fed according to a fixed formula. Again, as the old saying goes, one man's meat is another man's poison, and it must be left to the discretion of the Medical man to decide the needs of individual patients rather than tie him down to a formula.

We have made careful enquiries with regard to the diet of patients in the City hospitals. The existing schedule of diet for each patient with their approximate caloric value is as follows:—

Milk and Bread diet for Adults, costing roughly 4½ annas per day.

Convalescent :—		Quantity.	Caloric value.
Milk (Pure, cow's)	...	1½ pints	600
Bread	..	12 oz.	900
Butter	...	1 oz.	232
Sugar	...	2 oz.	233
Coffee	...	1 pint	Nil
Plantains	...	1	15
			1980

Ordinary, Indian, costing roughly 3 annas per day.

Rice	...	12 oz.	1200
Bread	...	4 oz.	300
Sugar	...	1 oz.	116
Butter	...	1 oz.	232
Plantains	...	1	15
Dholl	...	2 oz.	190
Green Vegetables	...	4 oz.	20
Coffee	...	Nil.	Nil.
Pepper Water	...	„	„
Buttermilk	...	1½ pints	75
			2148

Among the ingredients, coffee in our opinion must be eschewed from Indian dietary, and rice, ragi or wheat conjee with milk substituted for it. The breakfast which is served at 8.30 can be advanced by an hour, say, at 7.30 and thereby a longer interval may be given between that and dinner time, besides doing away with the unnecessary early morning coffee or even conjee. The breakfast may consist of bread, butter, sugar, milk and fruit. The poor Madras patients are not accustomed to take bread and butter in their household life and any nutritious substitute in their own staple grains, rice or ragi would be welcome. The dinner may consist of rice, ghee, dholl, two vegetables, of which one must be a leafy vegetable, with pepper water, sauce and butter-milk and this can be served at 11.30 or 12 noon For luncheon at 4 p. m. lime juice, orange juice or tomato juice may be given. Whatever savings that may accrue from coffee-eschewing, may be utilized for this feed. For the night meal, rice, sauce and one vegetable with milk will do.

We have indicated in the above lines what ought to be the rational diet for a canvalescent. The special diet for acute cases must rest with the medical officer and medical officer alone. There can be no tinkering with it. Robert Hutchinson and Mottram, in their "Food and Principles of Dieting" (1933, Edward Arnold, page 53) have calculated 3300 calories as the theoretical daily needs of a normal healthy man, doing 8 hours moderate physical work per day which includes 10% to account for the loss in digestion and utilization of food. Taking 35 as the average age of each adult Madrasee patient (ranging between the ages of 12 and 58) and the average height as 5'-5", the weight is 127 lbs. In sickness, the caloric value for that weight is 2200, which provides also for the loss, as stated above, for the healthy adult. Thus, we find the minimum requirement has been already provided in the existing hospital dietary under the headings, Milk and Bread, and Indian, ordinary. To try to cut down this bare minimum still further is to starve the patient. The authorities must see that the diet reaches the patients as prescribed. There is many a slip between the cup and the lip, so goes the proverb. Likewise, there may be many a slip between the kitchen and the cup. This must be carefully watched and effective supervision must be provided for.

There is another aspect which we would like to stress here, *i.e.*, the utensils in which food and drink are served. In some hospitals, we understand, that only one vessel is given for each patient, which is insufficient to hold the various items of food.

More vessels and separate vessels for drinking ought to be provided. The Ministry of Health evidently is largely looking at this problem through the eyes of the Treasury. The Medical man views it with the eyes of Science. We hope Col. Dyer will not overlook these opposing interests and will see to it that health and efficiency are not sacrificed at the altar of economy.

The Late Lt. Col. H. W. Acton, C.I.E., I.M.S.

WE regret very much to have to record the death in London, on 26th August '35 of Lt. Col. H. W. Acton, M.R.C.S., (ENG.), L.R.C.P., (LOND.), C.I.E., I.M.S., formerly Director of the Calcutta School of Tropical Medicine. Col. Acton went home on leave on 6th April 1933. Shortly after his arrival in England, he became seriously ill and having recovered, he was expected to return to India to resume his appointment in the autumn of 1934. But this hope was not realised as he was found to be physically unfit to discharge his onerous duties at the School. So, he decided to retire and applied for further leave preparatory to retirement which took effect just a few days before his death. Alas! he was not destined to live long to enjoy his well-earned rest.

Col. Acton was born in 1883 and was educated partly at Gravesend and partly at Bedford. He received his medical training at the Middlesex hospital. In the competitive examination for I. M. S. he stood first and entered service in July 1907 The first three years of his service was spent in the military department in the North West Frontier Province, as is generally the case with all I. M. S. Officers. In July 1910, he was posted to the Pasteur Institute of India as its Assistant Director. It looked as if Providence had by this appointment already decreed and fore-shadowed his future career. His work in collaboration with Col. Harvey, Sir David Semple, and Major Fox is significant, in that it was possible by their researches to introduce a standard and reliable anti-rabitic prophylactic. When in 1912, Col. Harvey was transferred to the Central Research Institute at Kausali, Col. Acton was made the Director of the Institute and Col. Knowles succeeded him as his Assistant. Cols. Acton and Knowles thenceforth came to be recognised as the twin stars in the medical horizon, shedding their lustre all over the tropical world, and bringing, by their numerous scientific researches, health out of disease and life out of death. These two ardent research workers worked together in this Institute on various subjects. Col. Acton's

The Antiseptic—September, 1935.

The Late Lt.-Col. H. W. Acton, C.I.E., I.M.S.

memoir on snakes and snake venoms is a valuable contribution to the medical literature.

In 1916, during the Great War, he was reverted to the military and was posted as Pathologist and Surgical Specialist at No. 12, Indian General Hospital, Amarah, Mesopotomia. Here his attention was directed against oriental sore and sand-fly. His discovery at the time that the bite of sand-fly is responsible for oriental sore and that the same sand-fly has something to do with the human infection with L. Donavani, was a momentous one, leading to a wider field of research in later years. He returned to India in 1918 and was posted to the Malaria Convalescent Depot at Dgshai. It was here he found, after laborious research, that the other alkaloids of cinchona were as effective as quinine, and they were cheaper besides. This has made mass treatment for malaria possible which, otherwise, will not be, with the more costly quinine.

In 1921, he was appointed Professor of Pathology, Bacteriology and Helminthology at the Tropical School of Medicine. In 1928, he became Director of the said school. His activities here have been put in a nut-shell by Lt. Col. R. N. Chopra, C.I.E., I.M.S., in these glowing terms :—"As a teacher, he is unrivalled, presenting the views put forward clearly and soundly. As an administrator, every department in the School owes a debt of gratitude to him for inspiration, for giving a lead in lines of work and for help. He has been Director of the School since 1928, and his loss to the School will be severely felt. It is above all as a Medical Research Worker that Col. Acton's name will always be associated with India and with Tropical Medicine. Genius has been defined as the Capacity for taking infinite pains; this Col. Acton has, but he also has what is perhaps better as a definition of genius—"the ability to grasp the essentials of a research problem, to map out the lines of investigation which should be followed and to co-ordinate results. The range of his researches has been enormous, covering such subjects as rabies, snake venoms, malaria, lathyrism, epidemic dropsy and many aspects of bacteriology and protozoology. Finally, as a legacy to the School, he has left us the one and only Department of medical mycology in the country, and introduced knowledge, classification and order into our study of tropical diseases of the skin—formerly one of the most confused subjects in Tropical Medicine".

Col. Acton's death has created a void in the medical world, which it is hard to fill. We offer our sincere condolences to Mrs. Acton and other members of the family in their bereavement.

Gleanings from Medical Press

MEDICINE AND THERAPEUTICS

A Fatal Case of Subacute Yellow atrophy of the Liver after Cinchophen.—[Thomas N. Fraser, *B. M. J.* Dec. 25, '34.]

Weir and Comfort published an account of 117 cases of toxic cirrhosis due to cincophen (atophan). Of the 117, sixty-one were fatal. According to them, the toxic symptoms arose after doses ranging from 54 grs. in five weeks to 7,200 grs. in four months. Its use in rheumatic affections has been based on the property which it exerts as an eliminating agent of uric acid, and on this its efficiency principally depends. To the property which the liver has for the breaking up of such chemical agents may be attributed the toxic action of the drug. Under liver influence the compound becomes broken up and benzene ring element separated off. The benzene element is then considered to attach itself to or combine with the liver cells, in which destruction or atrophy is produced, with general toxic characters.

History of Case

The patient, a female aged 38, saw her doctor at the beginning of April, 1934, with sore throat and acute pains in the joints. With aspirin and methyl salicylate application in the beginning and sodium salicylate and soda bricarb later on, she made a fairly good recovery. About three weeks later she was given twelve tablets of cinchophen (7½ grs. each) with instructions to take one nightly. After five days she visited the doctor, when faint jaundice was noticed. Cinchophen was stopped and mistura alba prescribed. The jaundice progressed slowly and in twenty-five days she was forced to take to bed and four days later became partially comatose, and was removed to hospital, when her condition become worse and eventually died.

Sections of the liver revealed a generalized necrosis of liver cells with an increase of the fibrous tissue between areas of necrotic cells. In places the fibrosis was more apparent, and a large number of bile ducts were recognised. Small aggregations of round cells were noted in different parts of the section. The appearances were those of a case of sub-acute liver atrophy.

The interesting points in this case were only 37½ grs. of atophan were taken and the early appearance of the jaundice.

Hazards of Induction of Pneumothorax in Treatment of Lobar Pneumonia.—Jesse G. M. Bullowa and Edgar Mayer, New York (*Journal A. M. A.*, July 20, 1935), believe that there is insufficient evidence to warrant the use of artificial pneumothorax in the treatment of lobar pneumonia except in large hospitals amply equipped for bacteriologic, serologic and roentgenographic studies. Pneumothorax therapy should not be employed by those inexperienced in the treatment of pneumonia or in the use of artificial pneumothorax. The favoruable results thus far recorded deal almost entirely with patients in the early stages of the disease and without bacteriæmia, and in pneumococcic types that otherwise have a low death rate. Prevention of bacteriæmia in patients has not been demonstrated. The response of dogs to pneumococcus type III is quite different from the response of patients. The use of artificial pneumothorax in pneumonia is still in the experimental stage.

The Adrenal Cortex.—In his discussion of the adrenal cortex Robert F. Loeb, New York (*Journal, A. M. A.*, June 15, 1935), states that it has been known for many years that destruction of the adrenals in the human being, or complete ablation of these structures in most animal species, results in death. Following the isolation and synthesis of epinephrine, it was shown that this secretion of the adrenal medulla would not maintain life. In human beings suffering from severe Addison's disease, as well as in totally adrenalectomized animals, this hormone, regardless of the dose or means of administration, proved to have little if any therapeutic effect. In experimental animals, extirpation of one adrenal and destruction of the medulla in the other led to no apparent deleterious effects; such animals survived indefinitely. Removal or destruction of both cortices, howeever, in the absence of sufficient accessory tissue, invariably caused death. Thus it was established that another substance present in the cortex of the adrenal was essential for life. Further proof of the validity of this idea was provided by the extraction of such a hormone and the demonstration that it would ensure the survival of the adrenalectomized animal. The discussion entails the preparation and assay of cortical hormone, the functions of the cortical hormone and the therapeutic application of the cortical hormone.

Cataracts Following the Use of Dinitrophenol: Preliminary Report of Three Cases.—Warren D. Horner, Richard Barr Jones and W. W. Boardman, San Fransisco (*Journal A. M. A.*,

July 13, 1935), observed three cases of cataract occurring in patients who have been receiving dinitrophenol as a weight reducer. The age of the patients and the absence of other external or physical factors suggest dinitrophenol as the cause. All three patients have shown posterior subcapsular opacities resembling brass fillings, together with faint powdery, anterior subcapsular changes. Two of the three have shown a peculiar dried appearance of the anterior capsule. In these two the lens changes have been markedly rapid in their development. In only one other condition, namely, frank traumatic cataract, have the authors seen lens fibers change so swiftly. In only one out of these four eyes has vision remained stationary for as much as three weeks. The others have progressed to blindness. The third patient has not been under observation long enough to determine progress. Since her opacities are the faintest that have been observed, the outlook may be better. The effect of dinitrophenol on the lens may be toxic, metabolic or dietary. It is known for a certainty that dinitrophenol does increase metabolism to a high degree and that it is possible to maintain this high degree during the administration of the drug. It is conceivable that the lens changes result from this excessive burning up of body tissues. Dehydration may be a factor, although this was carefully guarded against in the dinitrophenol administration. The hyperopia found at first examinations, particularly when previous refractions had been myopic, suggests a thinning of the lens with decreased refractive power. If this is a drying out process, the roughened, dry-looking anterior capsule might follow. However, forced fluids in one case did not cause any appreciable difference either in the appearance of the capsule or in the disappearance of hyperopia as compared with another case, in which less water was given. Another possible explanation might lie in some food deficiency on account of the restricted diet these patients received. Particular care was given, however, to guard against this in the selection of their diets. In six cases examined, in which dinitrophenol was taken for a considerable time, three showed lens changes of identical types.—*North West Medicine.*

Soy Bean Milk in Infant Feeding.—F. Rittinger, L. H. Dembo and G. G. Torrey (*Journal of Pediatrics*, 6 : 517-532, April, 1935) report a study of results of feeding 205 infants with soy bean milk in a period of three and a half years. Cod-liver oil was added to the soy bean flour from which the milk was prepared, and orange juice was given in addition. In some cases

skimmed milk was combined with the soy bean milk in order to increase the protein content. A study of the growth and development of the infants fed on the soy bean milk showed that their gain in weight, general development and resistance to infection were all satisfactory and paralleled that of breast-fed infants and infants fed on carefully prepared milk mixtures. The stool flora showed a high percentage of gram-positive organisms, resembling that of breast-fed infants. Roentgenological studies showed good bony development with few exceptions; in the few cases in which there were "suspicious signs" of rickets roentgenologically, these findings were not confirmed clinically. The soy bean flour and milk were found to contain adequate amounts of vitamins A, B, and D. In some recent formulas wheat germ has been added, however, to increase the vitamin B complex. Soy bean milk was found to be of definite value in the treatment of infantile eczema when there was evidence of sensitization to animal protein. It was also of value in the treatment of constipation in infants, owing to its "roughage" factor.—*Medical Times.*

Suprarenal Gland and Serotherapy in Whooping Cough.—O. Barbour (*Archives of Pediatrics*, 52 : 143-151, March, 1935) reports 192 cases of whooping cough in which desiccated whole suprarenal gland was given by mouth until the disappearance of the cough. In 56 cases this treatment alone modified the severity of the cough and shortened the course of the disease, and no other treatment was considered necessary. In 38 cases, especially in the later stages of the disease, the addition of small amounts of desiccated thyroid gland added to the suprarenal gland substance was definitely beneficial. In 58 cases non-specific protein therapy was used in addition to the adrenal gland substance, with marked relief of cough and other symptoms in 52 cases. In 40 cases pertussis vaccine was combined with the adrenal gland treatment and proved definitely beneficial in 36 cases. The author's experience has convinced him that "something, whatever it is, in the adrenal gland substance when it is given orally is unquestionably effective in modifying the course and severity of certain cases of whooping cough." And he is of the opinion that by combining the use of the adrenal gland substance (and occasionally thyroid) with some form of protein or vaccine therapy, (preferably pertussis vaccine), a marked decrease in the severity and duration of whooping cough can be obtained in 80 to 90 per cent. of cases.—*Medical Times.*

Different Physiologic Variations in the Hearts of Children.—*E. L. Levatus and P. D. Gurevitch*, Okhr. Zdor. Det. i Podr, No. 5-6, 1933, p. 60.

Three thousand, five hundred and ninety-six subjects, aged from 8 to 18, were studied. Of these, 500 were watched for five years. A selected group of 194 were examined five times during one year. All pathologic cases were excluded. The incidence of inorganic heart murmurs, distant heart sounds, muffled first sound, accentuated second sound and split second sound was studied. The most frequent sign was inorganic murmur, which tended to diminish with increasing age. The second most frequent sign was distant sound, which increases with age. The inorganic and functional murmurs are discussed so far as nomenclature and etiology are concerned. The authors are inclined to agree with Savetsky, Tregoubof and Feer that the production of the murmurs is due to deficiency of the mitral valve, which depends on hypertonicity and hypotonicity of the sympathetic nervous system. These authors think that the proper name for the murmur should be inorganic, to differentiate it from organic murmur, which is a pathologic condition of the valve itself. Examination of the blood showed that anaemia had no relation to these murmurs. Pharmacologic study indicated that the murmurs were due to disorders of the vegetative system. The most frequent location of the murmur was at the apex. The murmur was most frequently heard when the patient was in a recumbent position. It was found that inorganic murmur persisted in 46.4 per cent of the cases during one year of observation and in 36.2 per cent throughout five years. It disappeared in 5.8 per cent within one year and in 18.7 per cent within five years. No relation could be demonstrated between infections and the inorganic murmurs, although constitutional factors, such as asthenia, seemed to have an influence.

The location of the muffled first sound was similar to that of the inorganic murmur, and this sound could change to an inorganic murmur. The fact that the muffled first sound was best heard when the subject was in a recumbent position and the lack of influence of infectious disease favored the idea that the muffled first sound was the rudimentary form of the inorganic murmur and that it represented a variation from the normal.

Distant heart sounds were heard in children of better muscular development. The increase of distant sound with age was thought to be the result of vagotonicity of the adolescent period. Distant sounds were often associated with bradycardia. Infections were not found to influence the appearance of distant sounds.

Accentuation of the second sound was found to occur in the absence of nephritis and elevation of the blood pressure. The split second sound appeared when the subject was in a recumbent position, disappeared after exercise and frequently when respiration was arrested and could not be demonstrated to be connected with infection; it was thought to be due to vegetative dystonia. Examination of psychoneurotic children and normal children showed inorganic variations of heart sound equally present in both groups.—*American Journal of Diseases of Children.*

Gesse's Calorimetric Sign in the Diagnosis of Retroperitoneal Swellings.—*Zaytseva*, Vrach. delo 16:84, 1933.

The author discusses the value and the significance of Gesse's calorimetric sign which was first described by him in the various Russian medical journals and in the *Klinische Wochenschrift* in 1929. It consists in a variation of the cutaneous temperature of the lower extremities, depending on an irritation or paralysis of the lumbar division of the sympathetic nervous system owing to its compression by a retroperitoneal neoplastic or inflammatory mass. In the early stages of compression, or in the stage of irritation, there is a lowering of the temperature of the corresponding lower extremity with a hyperhydrosis and increased pilomotor reflexes. In the later stages of compression, which result in the paralysis of nerve branches, there is an opposite effect, namely, an increase in temperature with an anhydrosis and decreased pilomotor reflexes.

The case histories of four patients are given in which the diagnosis and the exact location of a retroperitoneal mass could be made by a barely perceptible variation in temperature (from 1 to 3 C. or from 33.8 to 37.4 F.), between the two lower extremities, before it was possible to do so by other clinical means. The diagnosis in each of the cases was confirmed either at operation or at autopsy.

The conclusions are that: 1. Gesse's calorimetric sign is a valuable aid in the diagnosis of retroperitoneal swellings. 2. It is an early sign of their growth and can be observed even when by the usual clinical means a definite diagnosis is not possible. 3. Gesse's sign allows not only the localization of the mass to the right or to the left of the peritoneal space, but also indicates the stage of its development, since in the early stages there are

signs of irritation, and in the later, signs of paralysis of the compressed nerve branches.—*American Journal of Diseases of Children.*

A New Drug for the Treatment of the Eustachian Tube and Middle Ear.—E. LeR. Wood (*Archives of Otolaryngology*, 21 : 588-590, May, 1935) notes that various vapors have been used for inflation of the Eustachian tube and middle ear. Most of these vapors increase the vascularity of the mucosa, but no vapor has been available to decrease the vascularity and congestion of the lining of the Eustachian tube and middle ear, when such action was desirable. Since the vapor of benzyl methyl carbinamine (benzedrine N. N. R.) has been shown to shrink and decongest the nasal mucosa, the author has designed an apparatus by which this vapor may be introduced into the Eustachian tube. Simple attachments have been devised by which the standard Eustachian catheter is attached to the ordinary benzedrine inhaler. In this way benzedrine vapor has been used for inflation of the Eustachian tube and middle ear in a large number of patients. It was found that the benzedrine vapor caused no discomfort and that it definitely increased the distending action of air and reduced congestion.—*Medical Times.*

Ionization in Vasomotor Rhinitis.—A. R. Hollander (*Archives of Otolaryngology*, 21: 448-455, April, 1935) states that it has not been definitely established whether vasomotor rhinitis is a local manifestation of a constitutional allergic state or a symptom of a metabolic, endocrine or nervous disorder. Pathologically it is not a true inflammation but "an œdema with eosinophilic infiltration". The author describes his method of intranasal ionization with the positive pole using copper, zinc, or "some other metallic chemical". He has had the best results with a 5/10 per cent solution of zinc sulphate. After the treatment there is "a grayish coating" over the entire nasal mucosa; this disappears in a few days; a slight exudate forms during the first few days which either loosens, is blown out or can be removed. Patients usually note subjective improvement in a few days. In 10 cases of true vasomotor rhinitis treated by this method during the year 1932, 5, or 50 per cent., have been definitely relieved of their symptoms, and have had no recurrence. Of 7 patients treated in 1933, all have been improved to some degree and 4 are entirely free of symptoms. Of 15 patients treated in the first six months of 1934, 8 have been relieved of symptoms, and the others somewhat improved. In no case has any ill effect of the treatment been observed.—*Medical Times.*

OBSTETRICS AND GYNAECOLOGY

Sterility in Women.—[A.C. Palmer, F.R.C.S., *Clinical Journal*, Feb. '35.]

For fertile marriage three conditions are necessary:

(1) The husband must produce normal seminal fluid and deposit it at the most favourable site.

(2) The wife must be able to receive the fluid at the external os and conduct it through the cavity of the uterus to the tubes, where a healthy ovum must be able to receive the spermatozoon.

(3) Fertilization being effected, and the ovum safely back in in the uterus, the latter must be able to house the ovum safely until the baby is ripe for birth.

THE HUSBAND.—In all cases it is necessary to question and examine the husband, and where there is nothing obvious in the woman to explain the sterility, the husband's seminal should be examined. In the ordinary interrogation of the husband syphilis should be excluded by the history, and in case of doubt by the Wassermann reaction. In cases of long-standing syphilitic fibrosis of the body of both testes may lead to absence of spermatozoa from the semen. Fibrosis of the epididymis due to gonorrhœa or bilater orchitis from mumps, undescended testicles, epispadias or hypoospadias, must be excluded. Huhner states that the husband can be regarded as fully equipped only when it is proved that he can deposit living spermatozoa at the external os. That the spermatozoa should be deposited at the external os is important, since it has been shown they may die in the vagina within one hour after coitus. Considerable divergence of opinion exists with regard to the responsibility of the male in sterile marriages. Duncan records 12 per cent; Huhner, 41 per cent, the percentage appears to vary between these two figures in different countries.

STERILITY IN WOMEN.—I. *Apparent sterility or sterility from lack of opportunity.* (1) Impotence of Husband. (2) Non-occurrence of coitus. (3) Vaginismus. (4) Dyspareunia. (5) Sex incompatibility.

II. *Primary sterility*:—1. Congenital: (a) Incurable and preventing intercourse—Absence of Vagina. (b) Possibly curable,

but preventing intercourse—(i) Atresia of vagina ; (ii) Stenosis of Vagina. (c) Incurable, but allowing intercourse—(i) Absence of ovaries; (ii) Under-developed ovaries; (iii) Rudimentary development of uterus: (iv) Infantile uterus; (d) Possibly curable and allowing intercourse—(i) Atresia or stenosis of Fallopian tubes; (ii) Slight under-development of uterus: (iii) Antiflexion with stenosis of the cervix.

2. *Acquired sterility*:—(i) Injuries of vagina and cervix causing stenosis; (ii) Cessation of ovarian activity; (iii) Pelvic inflammation—(a) Pelvic peritonitis from any cause; (b) Salpingitis from gonorrhœa, tuberculosis; (c) Vaginitis; (d) Chronic endometritis with cervicitis; (iv) Uterine displacements; (v) Ovarian tumours: (vi) Uterine tumours.

III. *Secondary sterility*:—Certain effects of labour in addition to the above.

CERTAIN SPECIAL CASES :

Azoospermia:—This condition may occur apart from venereal disease, mumps or any recognisable anatomical abnormality.

Impotence:—May be present in an otherwise healthy individual.

Non-occurrence of Coitus:—There may be no physical defect on either side, but nervousness, shyness or ignorance may render the first attempt painful and result in it not being repeated.

Vaginismus:—A painful spasm of the muscles of the vaginal orifice and elsewhere, set up by the slightest touch of the external genitals and quite independent of any local lesion. It can be overcome by surgical operation and the use of dilators.

Dyspareunia:—Painful intercourse, due to some local lesion: (a) A mere abrasion or crack. (b) Painful hymeneal caruncles. (c) Chronic bartholinitis. (d) Chronic vulvo-vaginitis. (e) Urethral caruncle.

Sex-incompatibility:—A condition of which very little is known, beyond the fact that the partners to an unfertile marriage may each produce later with a different partner.

Intravenous Use of Pituitrin in Obstetrics.—H. A. Baron (*Journal of Obstetrics and Gynecology of the British Empire*, 42: 322-326. April, 1935) reports on the use of pituitrin given in 1 minim doses intravenously in obstetrical cases. The best results were obtained in patients in whom the membranes had ruptured; and in secondary inertia of the uterus either before full dilatation, or after dilatation with the head on the perineum. In the latter cases, the use of low forceps was made unnecessary by pituitrin

given after the pains had ceased. The administration of pituitrin intravenously is contra-indicated in patients with cardiac or renal disease, in eclamptic patients, and when the patient has been delivered previously by cesarean section. A diagnosis of presentation and position must be made, and the condition of the cervix known before pituitrin is given. Pituitrin may be used also to control postpartum haemorrhage, but only after the placenta is delivered. In the 55 cases in which the author gave pituitrin intravenously, there was no maternal death and only one fatal death.—*Medical Times.*

Influence of Certain Drugs Upon the Uterus Postprtum.—(*Year Book of Obstetrics and Gynaecology*, 1934, pp. 298-299.) It has for several years been the practice of J. E. Tritsch and R. J. Brown at the Metropolitan Hospital to administer hypodermically 1 c.c. of pituitary extract immediately following expulsion of the placenta and 1 dram of fluid extract of ergot U. S. P. orally every four hours for two days. They decided to compare this routine with the following: ergotamine tartrate in doses of 1 c.c. by intramuscular injection immediately following the third stage of labor and 1 tablet of .001 Gm. of this drug by mouth every four hours for two days. Ergotamine tartrate, or gynergen was represented as a stable and standardized preparation of the one effective alkaloid.

The authors found that in spite of an average labor longer by about two hours, the group to whom ergotamine was administered appeared to have better uterine involution than the group receiving the usual pituitary-ergot combination; this difference was more marked in primiparas. Infections in this series were less in the ergotamine group, judged by the B. M. A. and the Metropolitan Hospital standards. After-pain in multiparas occurred about equally in each series up to the third day, after which a smaller number complained in the ergotamine series. After-pains occurred in about 80 per cent. of multiparas on the day of delivery and the first day postpartum, declined to about 50 per cent on the second day and to about 18 per cent and 7 per cent on the third and fifth days, respectively.

The fundi of the primiparas were higher on the average than the fundi of the multiparas up to the fifth day postpartum when the former contracted to a far greater degree, so that by the seventh day the primiparas had contracted 2 cm. more than the multiparas calculating from the day of delivery. The small 1 mg. tablets of ergotamine tartrate are much better tolerated by the stomach of the puerperal patient than the rather disagreeable-tasting fluid-extract of ergot.—*Medical Times.*

Book Reviews

Quarterly Bulletin of the Health Organization of the League of Nations Vol. IV, No. 2. June '35, Geneva:—We thankfully acknowledge receipt of a copy of this Bulletin for review. Nutrition in its relation to public health occupies 148 pages of this Bulletin and is a monumental piece of literature which must interest not only medical men but also politicians, agriculturists, social workers etc. The remaining 21 pages deal with two contributions one, 'On Tubercular standardization and Tuberculin tests' by Dr. T. H. Madsen and Dr. Johs Holm, State Serum Institute, Copenhagan and the other on, 'Latest results of Typhoid Serology' by F. Kauffmann, State Serum Institute, Copenhagan. We summarize below some of the salient and weighty conclusions arrived at in this report, on the subject of Nutrition:—

(1) "Diet is not only a factor in the prevention and treatment of disease; there is also a close relation between it and physical development and efficiency.

(2) Industrialisation influences diet through many channels. The development of industry and commerce involves the multiplication of sedantary office workers. The modern industrial worker and employee find a bulky carbo-hydrate-rich diet quite unsuitable to their circumstance; they demand a lighter, more concentrated regime rich in animal protein, fat and green vegetables and the number of meals is reduced to three a day.

(3) The diet must yield protein, fat and carbohydrate. The proportion of these is variable, but only within limits which are tolerably well established. Minerals are an indispensable part of the diet, though the qualities necessary are relatively small. From a practical point of view, the most important minerals in human nutrition are calcium, phosphorus. iron and iodine. There are a number of vitamins which are necessary for growth, health and even for life itself. Vitamins were once known as accessory food factors; it is now clear that they are very essential food factors.

(4) Appetite is influenced, not only by the body's need for food, but also by mental attributes; prejudices, theories, philosophical and mystical ideas may all strongly affect dietary habits.

(5) The figure 3000 (caloric requirements) has been very widely accepted and in view of the general consensus of opinion founded to some extent on phisiological evidence, any extreme departure from it requires defence.

(6) For practical public health work, a standard of 70 to 100 grammes of protein may well be employed and the desirability that a reasonable proportion should be of animal origin may be emphasized. Although the generous classical estimates of protein needs are still widely used, the modern tendency in many countries, is towards a decreased consumption of meat and therefore of animal protein.

(7) Fat has a satiety value; its high caloric content reduces the bulk of food consumed; it is the vehicle of fat-soluble vitamins; infants at the breast receive about half of their calorics in the shape of fat; it may yet be shown to possess some intrinsic quality of value to the organism. For these and other reasons, it seems advisable that standards of fat intake should not be too low.

(8) Malthusian nightmares of an overcrowded world living on the brink of food scarcity need trouble us no longer. We are entering an era of plenty. In backward countries increase in food production has hitherto often had the effect of increasing numbers without appreciably improving living standards; more are fed but the dietary level remains unaltered.

(9) Anxiety is often expressed by public health authorities in India at the presence of increasing numbers on the available food supply; it is asserted that improvement in the state of nutrition of the Indian masses can be brought about only by a reduction of population. Not infrequently, the introduction into primitive communities of the chief surplus foods of modern civilization results in a change for the worse. Primitive dietary habits, which have stood the test of long practice are disturbed. Improvement in the diet of the great mass of the world's population can be brought about only by a rational planning on an international and rational scale based on a knowledge of the principles of nutrition. If, for example, increased agricultural efficiency throughout the world results only in a greater production of the cheaper foods (*e.g.* cereals), an aggravation of the present economic chaos is likely to occur and new problems of dietary deficiency may be created.

(10) The General Problem of nutrition, as it presents itself to-day is that of harmonising economic and public health development."

The nutrition of school children and pre-school children have not been lost sight of, nor an account of the 'Food deficiency diseases', and 'Diet and teeth', omitted.

On the whole, the Bulletin is replete with valuable information

on nutrition and no praise will be too high and no reward will be too great for the services which the Health Organization of the League of Nations has rendered and is rendering for the common good of humanity.

Leprosy (with special reference to India).—*By Dr. S. N. Malhotra*, M.B.B.S; F.C.P.S. (Bom), M.D., (Volt). Chief Medical Officer, Jubbal State. 1935. 110 pages. (Rayan Pharmacy 97, Girgaum Road, Bombay) Price Rs. 4/4.

Leprosy is a world problem. As can be seen from a table on page 2 of the book, India heads the list with regard to the incidence of the disease in the British Empire. Dr. Malhotra studies the subject under various heads. After discussing the history, etiology, clinical diagnosis and prognosis, the author proceeds to describe the treatment of the disease. He emphasises and correctly too, the necessity of improving the general health of the patient'. He also gives the standard routine course as followed by him. In the early part of the book the author gives a very interesting description of a plan of compaign against leprosy. The book is very practical and will prove instructive to both students and practitioners.

Medical Case-Taking.—*By Bidu Bhushan Pal*, L.M.S., Teacher of Medicine, Dacca Medical School with a Foreword by Captain R. Linton, M.B., CH.B., B.SC., I.M.S., 1935. 191 pages. Price Rs. 2/8. Cloth bound. [Published by Indu Bhushan Pal, Dacca]

Case-taking, which in itself is an art, is very necessary before a correct diagnosis of any disease is done. Insufficient examination and inaccurate observations are the chief causes of wrong diagnosis. A systematic method is very necessary therefore for avoiding errors and Dr. Bidhu Bhushan Pal has, in this little book, attempted to supply the necessary hints to enable beginners to do correct medical case-taking. He follows the usual lines of all text books and in a brief but succint manner describes the various methods of examination. The book will be very useful to students.

The Treatment of Rheumatism in General Practice. — [*By W. S. C. Copeman*, M. A., M. B., B. ch., M. R. C. P., (London). Published by *Edward Arnold & Co.*, London. Pages 228. Price 9 *sh.* Net].

The coming out of the second edition of this book within

two years after the first publication is a sufficient proof of the usefulness and popularity of this book. The present edition includes the recent advances in therapeutic methods, namely gold-salt therapy, the use of histamine, bee-venom, and intravenous calcium in rheumatiod arthritis, of Evipan for manipulation and short-wave diathermy. The book is divided into three parts. The first part deals with Acute Rheumatism and its treatment, and Chorea and its treatment. In the second part, all diseases which are allied to rheumatism or supposed to be caused by it, namely Acute Muscular Rheumatism and Fibrositis, Sciatica and Neuritis, Rheumatoid Arthritis, Osteo-Arthritis and Spondylitis, and their treatments, are discussed. The third part deals with treatment and is discussed at great length under different heads, as General, Medicinal, Diet, Vaccines and Non-specific protein therapy, Physical methods, Manipulation, Baths, Colonic therapy, etc. As the title indicates, the book contains all the details which the general practitioner ought to know, if he wants to be abreast of the times. The book is highly practical and instructive, and we strongly recommend that this book must find a place in the book-shelf of every general practitioner. The author has worked in this field for a long time and is a specialist in the treatment ot these diseases, and as such he can write with greater authority on the subject than an ordinary textfbook writer.—K.L.N.R.

Heart disease in the Tropics.—*By H. O. Gunewardene*, M.B., B.S., (Lond.) D.M.R.E. (Cantab).—1935. pp. 101, Illustrated. Messers Butterworth & Co., (India) Ltd., Avenue House, Calcutta. Price Rs. 5/-

The object of this book is to present to the profession the various diseases of the heart with particular attention to their incidence, course, prognosis, modification in their treatment which they require in a tropical climate like ours in India. The book treats very clearly the features in Cardio Vascular diseases induced by tropical conditions and by diseases peculiar to the tropics and as such practitioners and students will find in it that which is generally dealt with meagrely in books of a similar kind written by well known authorities of the West. The author brings home the fact that although rheumatic fever has comparatively a low incidence in a country like India blessed with the perpetual tropical sun, lesions like mitral stenosis do occur in large numbers. Cardiovascular affection due to Rheumatism, in the tropics, are not infrequently non progressive and consequently such hearts are able to stand greater strain than those similarly affected in Europe. Auricular

fibrillation following a rheumatic infection is relatively less common in India.

Cardiovascular disorders in tropics due to diseases more prevalent in India like ankylostomiasis, Malaria, recurrent fevers and high blood pressure have been dealt with fully and their seriousness on the health of the sufferers sufficiently stressed.

We congratulate the author for filling up a long felt want in the literature on this malady and we wish it all success and popularty.

A Treatise on Hygiene and Public Health.—(With special reference to tropics)—*By Birendra Nath Ghosh*, F.R.F.P.S., (Glasg.) Revised and largely re-written with the assistance of *Lt. Col. A. D. Stewart*, C.I.E., I.M.S., 1935. Eighth Edition. Calcutta Scientific Publishing Co., pp. xv+660. With 163 Illustrations. Price Rs. 7/8 or 12 *sh.* 6 *d.*

This popular treatise needs no introduction to the Medical profession. It is in its eighth edition. The text has been completely revised and portions rewritten and much new matter added to make it up to date and within the scope of the modern conceptions of preventive medicine. Amongst the additions may be mentioned the chapters on Yellow fever, Relapsing fever, Typhus fever, Weil's disease, Mumps, Cerebro-spinal fever and Venereal diseases. Another notable feature of this edition is the collaboration of distinguished men like Lt. Col. Cevell, Dr. E. Muir, Dr. Kesava Pai and Dr. K V. Krishnan in the preparation of the text, in their respective specialities. Being the work of several distinguished men of science, we are sure this book would enjoy greater success and more appreciation from the profession than what has been accorded to it in the past. The printing and get up is good and the size handy. We wish it all success.

Materia Medica for Nurses.—*By Lois Oakes*, S.R.N., D.N., and *Arnold Bennett*, M.P.S., 1934 pp. 339. Edinbrugh: E. & S. Livingstone, 16 aud 17 Teviot Place.

This book has been prepared specially for the use of nurses under training and has been designed in conformity with the syllabus of the General Nursing Council. Administration of Drugs, Weights and Measures, the prescription, Posology, serological products anæsthesia, poisons and antidotes are some of the major headings under which the book has been expanded. It is written in an easy style and much of the details not necessary for the nurses has been avoided while the essentials have been well stressed and discussed.

We confidently hope the Nurses under training and the Nursing profession will find this a very useful companion in the discharge of their avocation.

The Madras Medical Directory.—1935. Second edition *By T. S. Lakshmipathy*. Available from Mathews & Co., 15, General Muthia Mudaly St., Madras. Price Rs. 2/8.

This is a directory of the Madras Presidency giving the addresses of medical men in Madras and the districts. It is certainly more elaborate and complete than the first edition published in 1932. The addresses however are not all correct, though we quite realise the difficulty in bringing such a directory uptodate. It should however be very useful to the medical profession in South India.

A dying Disease--Being some account of the Rise and decline of Syphilis.—*By Gerhard Venzmer*, M.D., PH., D. This is an historic and scientific account of the origin, development and decline of syphilis known as "the scourge of mankind". The services of Paul Ehrlich to humanity in making the world safe from the ravages of this dire disease is too well-known to need recapitulation in this short review. The booklet is written in a style, at once fine and fascinating and the reader cannot rest content with merely skipping over a few lines here and a few lines there. It captivates his heart and takes him amidst scenes of horror and suffering, through syphilis, in Mediæval Europe and makes him breathe a sigh of relief when at the end he finds Salvarsan and Neo-Salvarsan coming to the rescue of mankind-the crowning victories of Modern Science. The book is available for the medical profession only and can be had from Messrs. Havero Trading Co., Ltd., Bombay.

Fair Paly.--This is a booklet published by "Bayer's" Scientific Department, in defence of its synthetic drugs Atebrin and Plasmochin as dependable remedies for certain types of malaria, against the onslaughts of the "Bureau for increasing the use of quinine" in Amsterdam, which quotes or rather, misquotes the "Third General Report of the Malaria Commission of the League of Nations", as favouring quinine,exclusively, for treatment of malaria. The author merely asks for "Fair Play" and the

booklet is written in a modest and convincing manner, eschewing all traces of commercial jealousy or animosity. In the sense that it is an honest attempt to defend Atebrin and Plasmochin, the booklet is worthy of perusal by the Medical Profession.

Evipan Sodium.—This is another booklet issued by 'Bayer's Scientific Department. "In the last few years, the methods of inducing Anæsthesia have undergone some radical changes. The humane concept of making the induction less unpleasant for the patient has also made things easier for the anæsthetist, whose chief difficulty is to choose one out of the several new methods which may serve his purpose. With Evipan Sodium for short full anæsthesia and for introductory narcosis for long operations, the anesthetist possesses a preparation of proved reliability and safety". With these concluding words, the author has attempted to explain fully the efficacy of Evipan Sodium as an Anæsthesia in all general surgical and Gynæcological and obstetrical cases-not to mention special branches of surgery such as dental surgery, ophthalmic surgery and so on. The booklet will be found useful to Anæsthetists and Surgeons and can be had free from Messrs. Havero Trading Co., Ltd., Bombay, on application.

Preparations and Inventions

Exhibit of Burroughs Wellcome & Co., (Australia) Ltd.--British Medical Association meeting, Melbourne, September 9-14-1935.

The constancy with which Burroughs Wellcome & Co., remain in the forefront in the application of original research and of the latest scientific discoveries to medicine was well illustrated by the exhibits of this firm. The following products are selected for special comment. "Wellcome" Insulin is now made from Crystalline Insulin of 100 per cent. purity and is the first commercial product thus prepared. The recent announcement of the isolation of the new ergot alkaloid—Ergometrine—by Dudely and Moir was followed, within the remarkably short space of three weeks by the first commercial issue of several preparations of Ergometrine for administration by mouth or by injection. These products had a prominent place on the exhibit, together with Ergotoxine Ethanesulphonate, originated and introduced by Burroughs Wellcome & Co. The use of Ergometrine followed by

Ergotoxine Ethanesulphonate would appear to be ideal for use durrng the puerperium.

Digoxin, a pure, stable, crystallized glucoside, isolated from the leaves of *Digitalis lanata*, was also exhibited. This glucoside discovered at the Wellcome Chemical Works, Dartford, England, is of known and definite chemical composition so that the results obtained by its use are uniformly reliable. Digoxin may be used whenever drugs of the digitalis group are indicated.

'Tannafax', a preparation for the modern treatment of burns and scalds consists of tannic acid in a water-soluble base. It is always ready for application and is specially valuable for first-aid work. Several preparations for use in leprosy and which were introduced as the result of work conducted in the Wellcome Chemical Research Laboratories were also to be seen, while organic arsenic and bismuth preparations were shown as examples of spirillicides. Numerous 'tabloid' Brand products were exhibited. These are characterised by exceptional purity, accuracy of dosage and reliability.

'Kepler' Cod Liver Oil with Malt Fxtract is a valuable dietary adjunct and contains vitamins A, B and D in their natural association It is extremely palatable and easily digested.

A comprehensive array of 'Tabloid' Chests and Cases, 'Tabloid' Hypodermic Pocket-Cases and hypodermic apparatus formed a feature of the exhibit. These cases are distinguished by completeness and compactness. The whole exhibit of Burroughs Wellcome & Co. was representative of the firm's high standing and the products shown were of the usual remarkable quality associated with this firm.

Dr. Purohit's Shwashari Compound Manufacturers. — Dr. Purohit's Pharmacy, Near Old Palace, Kolhapur, (India). This is Shwashari plain with the addition of drugs acting on the Liver like Ammon. Chl, Cascara Sagrada, Ipecac, Aloes. This compound has claimed excellent results in Asthma associated with Torpidity of the Liver and Intestines. Shwashari plain has been in the market for some time now, and we are sure this new preparation will receive equal consideration at the hands of Physicians. Packed in *usual size* 3 oz. and 6 oz.; and *Hospital Size*, 12 oz. for the Medical profession.

Notice

"Charak Memorial Prize"*of the value of one hundred rupees for a Thesis on **'Antiquity of Syphilis (Veneral Diseases) in India'.**

Conditions.

1. The Thesis should be in English. Short quotations from original references in Sanskrit or other languages will be accepted.
2. Complete bibliography of authors, facts and figures, data of matter in the thesis should be given.
3. The thesis should be submitted, typed on one side only, in foolscap size paper with double spacing and margin on the left, and should not exceed fifty such pages. The manuscript should reach the Editor, 'Indian Journal of Venereal Diseases' 94, 97, Girgaum Road, Bombay, 4, by registered post by the **30th December 1935.**
4. There is no territorial bar for competitors.
5. The thesis submitted will be judged by a small Board of Examiners.
6. The winning thesis will become the property of the Indian Journal of Venereal Diseases, and published in one of the issues. The Journal will have its copyright.
7. No reason will be given for refusal or rejection of any or all the theses submitted. The decision of the Editor shall be final on all matters.
8. An authoritative, literary and scholarly article will be appreciated.

Messrs Bombay Surgical Co., Bombay have asked us to announce that they have not engaged any travelling representative and that one Mohan who is posing himself as their representative and collecting advances *etc.* from their customers has nothing to do with them or their firm and that our readers must therefore be guarded against such imposters. They have lodged a complaint against him to the Commissioner of Police, Bombay and they would be thankful if any of our readers coming across that man should hand him over to the Police.

* Dr. Franklin H. Church in his letter to us (published on pp. 177-178) mildly rebukes his colleagues for their seeming indifference towards the important subject of medical antiquities. In order to arouse real interest in such subjects, we are offering this prize with a firm belief that the competitors will probe into the mysteries of yore and bring out a classical monograph on the subject.

The names of the judges will be published later.

It is also intended to to make this "Prize Scheme" a special feature of this Journal and subjects and prizes will be announced in our future issues.

(Editor, Ind. Jour. Ven. Dis.)

Therapeutic Review

A patient of 40 who had been victim to Asthma and Ch. Bronchitis writes:—

"Being engaged in Postal Service at Punjee and living at a distance of 2 miles from the Office, my meals were irregular and my habits intemperate. I used to take cold baths twice. On one night, I was exposed to cough which developed into Asthma. I was treated by a well-known native doctor but being helpless had to change treatment from one to another. One Allopathic tried his best with injections, oral medicines, inhalations of fumes of medicinal powder & cigarettes and lastly prescribed some English and French patents which to some extent gave me but temporary relief. One year passed and the disease got worse and worse every day. My luck came forward and a friend of mine gave me a bottle of Dr. Purohit's **SHWASHARI.** The very day of its treatment, it proved me a heavenly boon. My cough liquified, chest cleared, breathing was easy and I got sound sleep. Bowels opened and I enjoyed the real happiness in the world."

Shwashari is sold at all Chemists in 3, 6 and 12 oz bottles for Rs. 2, 3-8, & 6, respectively.

Prepared by

Dr. Purohit's Pharmacy,
Kolhapur.

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Edited by

Dr. U. Rama Rau & U. Krishna Rau, M.B., B.S.

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ORIGINAL ARTICLES

Diet in Disease*

BY

A. K. BHATTACHARYA, M.B., (Cal.),

Moradabad, U. P.

Mr. President and colleagues, as you all know, in our daily practice, as soon as one prescribes for a patient the latter will invariably ask, '*Kanae ka parae haja*' *i.e.*, what diet he should take and what not. So that the importance of Dietetics in the treatment of disease is of practical utility to everyone of us. In the modern hospitals of the West, properly trained Dietetians are kept to day to do full justice to this branch of therapeutics. I have ventured, in the following pages, to deal with this vast subject very briefly.

Mention may be made here of the great maxim of Ayurveda, the Hindu System of Medicine:—"*Na thu pathia Vehenaena Baeshajanam xato e rapi*" *i.e.*, even hundred and one drugs are useless to a diseased person without a proper Diet.

Before proceeding to discuss Diet in Disease, I think, it will not be out of place to mention a few salient points regarding normal diet in health.

Food as we take has a twofold destiny:—

(1) To supply the energy necessary to maintain the body alive and for the performance of work.

(2) To replace the wear and tear of the body.

* A paper read before the Moradabad Medical Association in November, 1934 and specially sent to 'The Antiseptic' for publication.

To supply the energy requirements, all the three classes of food, protein, carbohydrate and fat can be utilised whereas proteins are absolutely necessary to repair the wear and tear of the body.

For the maintenance of health and efficiency, a dietary should contain :—

1. A sufficient Caloric value depending on the nature of work of the individual.
2. Protein, fat, carbohydrate and water. Protein and fat should not be less than 70 gms. a day for an average man. Animal proteins are far superior to vegetable proteins so far as their biological value is concerned. Thus meat or milk protein is much more easily utilised by the body and has a better food value than the proteins in pulses. This important fact is awfully neglected by those vegetarians of our country who do not care to include even sufficient milk in their dietary. History proves that nations which have been large consumers of milk and other dairy products have always sound teeth, strong limbs, good health and vigour. Countries like New Zealand which have the longest average span of life in the world consume more dairy products and maintain a greater number of milch cattle for their subsistence than other countries.
3. Certain proportions of fresh foods containing the vitamins and mineral constituents.
4. It must be palatable. The digestive juices are stimulated by appetising foods. Hence the importance of good cooking, flavouring agents, beverages and condiments. The real food value of a certain article of diet is determined not only by its digestibility but also upon the extent to which it can be absorbed and metabolised by the individual who takes it. Time was, when the importance of caloric value and protein content of food was, perhaps, over-estimated. Time has come to day, when the scale has turned towards vitamins and mineral constituents of the food and their importance is probably over-estimated now-a-days.

In general, our food in India is qualitatively poorer in several respects when compared with the food of other civilised nations of the world and this is perhaps, one of the chief causes, why the average span of life in India is only 22 as compared with 58 to 65 in America and European countries. With the astounding ravages of

diseases, appalling mortality and morbidity, our doctors, our press, our leaders, our pulpits are either ignorant or silent as regards the vast importance of food and its bearing on hundred and one problems both social and political in India to day. More than 50 % of children in India die within the first year of life and of the surviving half, 10 to 20 % are diseased or defective. 50 % of our school-children are foul-breathed, bad-toothed, big-tonsilled, short-sighted, flat-chested, flat-footed and pot-bellied. And what is the reason ? Their food.

One of the many things that the great war has taught us is that most of us can live a healthy life on much less food than we usually take. Over-feeding and lack of muscular exercise is responsible for many of the disorders of middle life. It has been found that for one leading a sedentary life, a moderate protein and fat diet is more suitable than one consisting chiefly of carbohydrates as is usually the case with millions in India.

One of the fundamental facts of preventive medicine is that one should have a sufficient body resistance to fight out any sort of injurious infection and this immunity depends, to a great extent, upon the nature of food one takes.

Let me now take up a few common diseases in the treatment of which diet plays particularly an important part.

Pyrexial Illnesses

In all feverish states the katabolic phase of the metabolism is greatly increased. The increased output of nitrogenous substances in the urine, the wasting and loss of weight of the patient are all indications that there is great destruction of protein. Due to imperfect oxidation of fat there is a tendency to acidosis. As there is so much loss of protein one may naturally think of increasing the protein constituents of food during fever But practically it cannot be done because it leads not only to upsetting of digestion but also to a great strain on the part of the kidneys and liver in eliminating the products of protein decomposition. But this protein destruction in the body can be diminished a good deal, by giving a feverish patient carbohydrates and fats. But fats are very ill-borne and ill-liked by feverish patients and this is probably nature's own way of preventing acidosis in fever. This leads us to fall back chiefly on carbohydrates as diet in fever. The thirst is perhaps nature's call for water and should be fully satisfied with cold water as there is an increased loss of water as moisture by the breath and by sweat. Scanty urine is an evidence of it. Plenty of water and fruits are very scientific in the dietetic

regime of a feverish patient as the former supplies the increased need for fluid in order to maintain the balance of water and salts in the system ; ripe fruits will give sugar and vegetable acids which in the body will supply carbonates thus helping in diminishing Ketosis. As the secretion of digestive juices is considerably diminished in fever very easily digestible diet should always be given. Patient's desires and inclinations should also be taken into consideration in selecting the diet as there is seldom any good urging a patient to take any food against his inclination. Considering the great cellular destruction and nitrogen loss in feverish states, starvation treatment is injurious in these conditions. The common belief amongst the laity of our country that no food should be given in fever which is often re-inforced by the "*Langana*" (fasting) treatment by Vaids and Hakims is absolutely wrong and unscientific. But at the onset of any acute Pyrexial disease, keeping the patient on a very low diet for 24 to 48 hours is not bad, nay, rather good. Barley water, sago water or gruel, milk, alone or modified with soda citras or mixed with barley water, albumin water, ripe-fruits should form the dietetic regime of such patients. Barley water flavoured with a little orange juice and a few drops of lemon juice and a little glucose added, forms very pleasant as well as useful drink. Imperial drink is also very much liked by these patients. Glucose is particularly advantageous in fever like Pneumonia. In long continued fevers *eg.* typhoid, the maintenance of nutrition is a great problem. To obviate the dangers of perforation and haemorrhage in typhoid fever one used to be rather ultra-cautious in dieting such a patient in the past. This more or less starvation treatment in this disease has now been found to be injurious in many respects. Of course undue loss of appetite and tendency to abdominal distension or development of diarrhœa in typhoid make one very much handicapped in dieting. Freshly prepared whey, skimmed milk, albumin water, lactose, Mellin's food, (a purely dextrimaltose), barley water etc. properly given, suits even in the very acute stage. Colityphoid group of bacilli being glucose-fermenters, lactose should be preferred to glucose in these cases. Sufficient fluid must be given to avoid dehydration. With convalescence, Horlick's Malted milk or glaxo, cow's milk, sanatogen, broth, soups, egg flip, can be taken recourse to.

Urinary System

Acute Nephritis.—As the elimination of protein, water and salts is restricted through the inflamed renal tubules, all these should be curtailed from the diet to minimum quantities. As

milk contains all these in fair amount, it is injurious to give much of milk to these patients. Barley water, arrowroot, sago gruel, freshly prepared butter milk, fruit juice, small quantities of milk, alone or mixed with barley water should form the dietetic regime of these patients. Tea, cocoa, coffee being methylpurins are badly eliminated by the damaged kidneys and should therefore be restricted strictly. As the patient becomes better gradually, more liberal diet containing carbohydrates and fats and little of proteins should be allowed. Meat and soups should be forbidden totally.

Chronic Parenchymatous Nephritis.—Here, Epstein's high protein diet is very useful provided it is administered in cases where blood urea is found on previous estimation to be not raised above normal. This diet is contra-indicated in cases where there is nitrogen retention in the blood so that concentration of urea in the urine should be at least 2%. It is thought that urea converted from the protein diet stimulates the kidneys for free diuresis and so the patient improves clinically. Normally, on an average, 1 gm. of protein is required per kilogram of body weight. In High Protein Diet, besides this normal amount, an extra 6 gms. of proteins should be added daily to the diet. This 6 gm. is supposed to be the average daily loss of protein in the urine by these patients. In giving this protein diet, purin-rich protein should be strictly omitted. Salt should also be curtailed to some extent. Fresh fruits and vegetables are themselves very good diuretics.

Chronic interstitial nephritis.—" Dish of herbs and contentment " as the saying goes is best suitable in these cases. Diet should consist mainly of fruits, green vegetables and carbohydrates. Blood urea is to be estimated in order to regulate the intake of nitrogen. When the blood pressure tends to range high milk diet with rest should be resorted to. Purin-rich diet should be strictly restricted.

Infections of the Urinary Tract.—The introduction of ketogenic diet in recent years, in the treatment of infections of the urinary tract has been a very useful advance. When one starves or takes a diet low in carbohydrates and high in fats, there is incomplete combustion of fats and Ketosis is produced. Exactly the same happens in Diabetes, due to disturbed carbohydrate metabolism. What actually occurs is that products of incomplete combustion of fat namely aceto-acetic acids, Beta-Hydroxybutyric acid which could have been further oxidised if sufficient carbohydrate was metabolised, are absorbed into the

blood and excreted in the urine. B—Hydroxybutyric acid has been shown to have a marked bactericidal action in acid urine. This fact has been taken advantage of in prescribing ketogenic diet in B. Coli and other infections of the urinary tract, with great success. In normal diet the proportion of fat to carbohydrate + Protein = 1.5 : 1. In a ketogenic diet this proportion is about 2 or 3:1. As a general rule for an average person the food should contain daily 15 gm. of carbohydrate, .7 gm. of protein per kilogram of body weight and sufficient fat (roughly 200 to 275 gm.) to make up the total calories. The reason for diminishing protein intake is that a certain amount of glucose is formed by the breakdown of protein. In children usually ketonuria follows a much less drastic limitation of carbohydrates. In acute cases of pyelonephritis or cystitis at first the infection is to be controlled by medicinal treatment and as soon as the constitutional symptoms are relieved ketogenic diet is prescribed. In chronic cases it may be given straight off. Urine must be sufficiently acid to have an useful effect by ketogenic diet. To increase the acidity of urine, acid sodium or ammonium phosphate, calcium chloride, ammonium chloride or nitrate or mineral acids may be prescribed in sufficient doses. Ketonuria should develop in 3 to 5 days. If not developed within 12 days perhaps this form of treatment will do no good to the case, though several courses of treatment prove useful in some cases.

Epilepsy and Migraine have also been treated, of late, with encouraging results, with Ketogenic diet.

Anaemia

One of the chief achievements of modern medicine is the discovery of Minot Murphy diet in pernicious anæmia. Liver diet in pernicious anaemia is now considered to be as good a specific as Thyroid in Myxœdema. Leaving aside the theories as to how it acts, the fact remains that under a dietetic regime of mammalian liver cases of pernicious anaemia, that were thought incurable before, are completely cured now-a-days. The secret of success however, depends on the fact that adequate amount of Liver must be administered and continued for a long time to prevent the return of symptoms. Liver therapy is also useful in some secondary anaemias in which red cell formation is depressed. At least half a pound of raw liver or its equivalent is to be given daily though often much larger dose is required. Various proprietary preparations of Liver extract both in palatable and injectible forms are now available in the market but being rather

costly one is handicapped to prescribe them to poor patients. In these cases a glycerin extract of minced raw liver flavoured with sufficient orange and lemon juice can be given. But many patients specially of the fair sex in whom anaemia is pretty common, cannot withstand the taste; there one can only take recourse to very lightly cooked liver. Desiccated Hog's stomach has also been found in recent years to do marvellous good in these cases. Ventriculin, Exbomak, Pepsac etc., are proprietary preparations of it in the market. But they are also costly and not palatable.

The relationship between anaemia and Vitamin deficiency is not yet a clear cut one. But marmite which is very rich in B vitamin has been used with great success both in pernicious and secondary anaemias. It should be given in adequate doses and the bad taste disguised with some flavouring agent. A mixed dietary with fresh vegetables specially those rich in Iron *e. g.* green leaves, green plantain etc., should be indulged in.

Influence of Diet in Endocrine Deficiencies

Tetany.—The relationship of Parathyroid hormone with vitamin D and calcium metabolism is very important. In some forms of Tetany where blood calcium is below normal, administration of calcium rich diet along with vitamin D and Parathormone proves very beneficial. Milk is a very good calcium rich food as the calcium is in an easily assimilable form. Other calcium rich foods, from our daily dietary are unpolished husked rice, chana dal, Lady's finger (*'bindee'*), pumpkin, palwal and mutton Milk, butter and eggs ensure a free supply of D Vitamin.

Goitre.—Lack of Iodine in the diet has been certainly proved to be one of the contributing causes of certain varieties of goitre. It has been proved beyond all doubt that simple goitre is rare in people where diet contains a proper supply of Iodine. Again the soil or water of endemic areas of goitre contains less or no supply of Iodine. Hence the importance of adding Iodine and Iodides to the diet in endemic areas of goitre. A mixed diet of plenty of vegetables, fruits, cereals, fish and milk contains sufficient Iodine to carry on the normal thyroid function. A vitamin deficiency has been suggested in lymphadenoid goitre.

Diabetes.—Turning now to diabetes, we know that it is produced by the endocrine deficiency of Islets of Langerhans in the Pancreas. Glucose cannot be utilised in the tissue for deficiency of Insulin. Due to incomplete oxidation of glucose, fat metabolism is also affected resulting in ketosis. Administration of Insulin can set these changes to right. Besides helping in the utilisation

of sugar in the body, Insulin given with sufficient glucose can combat Ketosis very well. Restriction of carbohydrate in Diabetes is a time-worn practice and the sugar tolerance can be increased to some extent by this means. But in modern times with Insulin at our hospital it is neither necessary nor desirable to curtail so much the carbohydrate intake of the Diabetic. With proper administration of Insulin, a Diabetic can now-a-days be given, with impunity, almost the ordinary diet of healthy man according to taste and inclinations. It is now-a-days thought preferable to secure rest of the Islet tissues of the Pancreas by means of Insulin rather than by starvation or semi-starvation. The High Fat Diet of the past used to produce Ketosis and was rather antagonistic to Insulin itself. Rather a high carbohydrate diet with less fat and appropriate dose of Insulin has been found to be much more advantageous, in recent years for a diabetic patient. The Satiety value of the food can also be very well taken into consideration by this means and monotony in the same sort of diet daily, avoided. Of course very sweet articles of diet ought to be taken sparingly. Chapatis made of Beshan or bran and cocoanut scrapings sujibread preparations of '*besana*' *e.g.*, *papayee*, *vadae*, *salv* Beshan coated fries of cabbage, cauliflower etc, fruits *e.g.*, Black Beri,nuts of all kinds *e.g.*, *vadama*, *pista*, Dahi, eggs, lean fish and meat etc., are some of the useful and welcome articles of diet for a Diabetic patient.

Obesity

The influence of diet in obesity is great. It is now a proved fact that in obesity due to thyroid deficiency, food intake plays a great part both in its development and treatment, though thyroid extract might be the sheet anchor in the treatment of this condition. The principle of dietetic treatment of obesity rests with lowering the total caloric value of the diet, restricting the intake of fat most and carbohydrates next. Butter, ghee, cream, fatty fish and meat etc. ought to be excluded, sufficient protein must be included in the diet and the antiketogenic ratio of fat to carbohydrate should be maintained. Water and salt intake must be regulated. Reduction of weight of obese persons should be gradual and not hasty: occasional fasting is useful. The traditional fast days of '*Amavasya*', '*Purnima*', '*Ekadesi*' are generally turned to account for this purpose.

In all the conditions of Endocrine deficiency mentioned above replacement of the particular hormone is essential along with dietetic treatment which is only an accessory factor.

Digestive System

Peptic ulcer.—Dieting a case of gastric or Duodenal ulcer is a difficult problem and the patient's co-operation is essential. Any diet that may directly irritate the ulcer or indirectly so by stimulating excessive secretion of Hydrochloric acid in the stomach, must be avoided. In the beginning, with a careful administration of small quantities of milk and alkalies at frequent and regular intervals the Hydrochloric acid in the stomach is to be kept completely neutralised day and night. With the healing of the ulcer and abatement of symptoms non-irritating solids should be gradually added to the diet. The importance of eating slowly and masticating the food properly is to be enjoined upon the patient.

Diarrhoeas and Dysenteries

As the contents of the small intestine are hurried down in these conditions, such diet should be given as are easily digested in the upper bowels and leave very little residue. So long as undigested or indigestible things are suspected to be there in the bowels, no food should be given except water. Solids should be avoided as far as possible. Fats and rich foods are badly tolerated in diarrhœic conditions and should be rigidly restricted. Barley water, arrow-root, satifood, fresh buttermilk, lemon whey, skimmed milk, albumin water flavoured with orange juice, banana powder etc., should form the menu. With progress towards recovery gradually more liberal diet should be given. Pure milk is often not well tolerated even in convalescence but citrated milk or milk mixed with barley water might be easily digested as the casein in curd is thinner in that case. Peptonised milk, Benzer's food., desiccated milk *e.g.* Glaxo, Horlick's, etc., are also helpful. To make barley water, both Robinsons' and Pearl barley are good but the latter requires at least three hours boiling. Fruits being laxatives are forbidden in diarrhoea.

Ishafgul soaked in water overnight forms a useful demulcent in dysentery.

Pulp of the ripe Bael fruit mixed up with whey water to form a thick liquid mass, strained and a little sugar added, forms a beneficial and pleasant diet in dysentery.

In chronic diarrhoea and dysentery nutrition of the patient is to be maintained by all means. Bland non-irritating diet is to be given. Articles of diet that are difficult to digest and leave a lot of residue should be avoided. Dahi or buttermilk freshly prepared is very useful In preparing Dahi or buttermilk, cow's milk is to be preferred to baffaloes'. During convalescence fruits

like Pine-apple, Papay etc., are very good owing to their power of Protein digestion.

In colitis, if the stools are alkaline and there is evidence of excessive putrefaction proteins should be curtailed from the diet whereas if the stools are acid and there are signs of fermentation and flatulence carbohydrates and cellulose in the diet should be restricted. Everything which would irritate the colon ought to be prohibited.

Constipation.—Where insufficient food-residue is the main cause of this common complaint, the so called "Ballast diet" containing plenty of vegetable foods especially those containing much cellulose is to be prescribed. Brown bread, cream and fruits should be liberally supplied. Plenty of water in between meals is of no little help to obviate constipation.

Sprue.—Dietetic treatment is the sheet anchor in the treatment of sprue. Perhaps in no other disease the co-operation of the patient is so absolutely necessary for success. What is known as 'milk cure' has been found to be the best in this condition. The patient is kept absolutely on milk and milk alone, with gradually increasing quantities beginning from a seer or so daily to 3 or 4 seers according to tolerance. The two very practical hints suggested by Manson are: (i) The milk should not be drunk but sipped. (ii) For six weeks dating from the time the stools become solid and the mouth free from irritation no other food or drink, whatsoever, should be permitted.

A portion of the milk can conveniently be taken peptonised or turned into Dahi if necessary. To avoid monotony milk may be supplemented by Benzer's food. When tolerance to solid diet seems to be established, easily digestible foods *e.g.*, barley, arrow root, sago, eggs, lightly cooked liver, fruits etc., should be gradually added to the dietary. Bananas, apples and bael fruit have been found by experience to have a marked beneficial effect in these conditions, some have obtained good result on an exclusively meat diet but opinion is divided. 'Sprulac' a preparation of powdered milk containing required quantities of various food principles which only require to be added to water for ready use has been conveniently used recently with successful result. In view of the similarity of many of the symptoms of sprue to pernicious anaemia liver therapy has been used recently in these cases with great success. As the digestion and power of absorption is greatly impaired in Sprue, liver extracts given parenterally is much better than oral administration of liver. Absolute rest in bed and proper clothings are as essential in sprue as strict

adherences to a purely milk diet from the early stage up till tolerance for solid diet is established.

How milk diet cures sprue is not yet properly understood but the efficacy of a strictly milk diet in chronic enteritis group of cases has been wonderfully proved in the hands of Ayurvedic physicians of our country since ages. (The so called '*Dugtharpatee in 'grahni'*.)

Gall Bladder Disease

In cholecystitis and associated gastro intestinal disturbance a bland non-irritating diet of small meals at frequent and regular intervals is the best. Here, no single diet is applicable for all patients, due to the protein manifestations of the disease. In those who are obese restriction of fat and cereals for a gradual reduction of weight should be enjoined. Fats should be prohibited to those with distinct intolerance for them. If the cholesterol content of blood is found to be increased, a cholesterol free diet should be given, avoiding yolk of egg, butter, cream, liver, kidney, brain and animal fats.

Role of Diet in Pregnancy and Ailments of Children

Defective and improper feeding of the expectant mother during antenatal period is responsible for a large percentage of the causes of fœtal mortality and maternal morbidity. In the antenatal period plenty of foods ought to be given to the expectant mother in order to ensure a sufficient supply of calcium, iron, iodine, phosphorus and other minerals as also the fullest vitamin content both so essential for the maternal and fœtal economy. The incidence of toxaemias of pregnancy *e.g.*, eclampsia, hyperemesis gravidarum as also puerperal sepsis has been markedly reduced of late, by a proper care of the antenatal period, in which dieting forms a chief item. The A and D vitamin preparations like Adexolin, Haliverol, Ostelin etc., are very convenient and useful forms of supplying these vitamins both to the expectant mother and foetus.

Diarrhoea in Children

The main cause of gastrointestinal disturbance in children is improper feeding; of course infection also takes its heavy toll. The problem of infant feeding specially when breast-milk is not available for any cause is a vital one. The way in which artificial feeding is usually done in our country particularly amongst the poor and middle classes is very defective and is responsible for most of the ailments of gastrointestinal tract in our infants. To get a proper wet-nurse is also not easy here.

In acute diarrhoea of children it is advisable to follow the starvation treatment for 12 to 24 hours or more, giving only plain water or rice water (1 tablespoonful of rice to one pint and a half of water, boiled, strained and a pinchful of salt or gr. ½ of saccharin added). Children withstand starvation very well if kept warm and supplied with plenty of water. After the starvation period skimmed milk or freshly prepared whey, alone or with addition of a little dixtrimaltose may be safely given. Fats and cow's milk are better strictly prohibited for sometime. Whey may be prepared with lemon juice or lactic acid. Skimmed milk may be easily prepared in every house as follows :

> "Take a small enamel douche can, insert a cork in the tube outlet and simmer therein freshmilk for half an hour, then remove and place on ice or cold water for 2 hours. The fat of the milk has, by then, all risen to the top and the lower two thirds in the vessel can be obtained by removing the cork from the outlet and letting the milk run into a clean jug. The milk is to all intents, fat free and should be given diluted 1 in 3 to start with, gradually increasing the strength."

If the diarrhoea be due to infection with some putrefactive group of bacteria as is usually the case and in which the stools are alkaline and very offensive and the buttocks of the child are not sore or red, barley water, rice water, glucose 5 to 10% solution should be given as putrefactive bacteria cannot thrive on a carbohydrate pabulum. But on the other hand if the infective organisms are gas forming and the stools are acid and sour, the buttocks are scalded and red albumin water should be given as these bacteria do not thrive on a protein pabulum. After the acute stage is passed return must be made to ordinary diet very gradually.

In mucous disease of children carbohydrates should be restricted very much.

Children are likely to develop acidosis very easily so that free use of glucose is to be ensured in such threatening cases.

Heart Disease

A patient with serious cardiac affection should take less fluid in the diet than normal. This lessens the work of the left ventricle by diminishing the volume of blood. Rather dry food is to be taken, sufficient fluid being taken in between meals. Overloading of the stomach directly or with articles of food which causes flatulence is very injurious as pressure is thereby exerted

on the embarrassed heart. Diet should be easily digestible and nutritious. With serious symptoms of cardiac failure amount of diet should be very low.

High Blood Pressure

Reduction of the amount of food is the first essential. Restriction of Protein diet is necessary only with associated renal failure, otherwise no positive benefit has been shown to have occurred by an unnecessary limitation of protein diet. Regarding restriction of salt there is difference of opinion. Some think imbibition of large quantities of water useful.

Rheumatism and Gout

In acute Rheumatic fever, because of the profuse sweats plenty of water should be given. I could not determine why fruits are forbidden in this condition by authorities like Sir Thomas Horder. While prescribing a diet in Rheumatoid arthritis two factors are to be kept in mind :—

(1) Avoidance of constipation which is so common with it.

(2) Sugar tolerance has been found by experience to be reduced in Rheumatoid arthritis and fibrositis *e.g.*, Lumbago, sciatica etc. Pain in these cases is often increased after a high carbohydrate diet so that restriction of carbohydrates is beneficial to these patients. The common belief that Blood Uric acid is increased in Rheumatoid and Osteoarthritis is often erroneous. In case it is actually raised then only should meat etc., be restricted. In dieting a case of osteoarthritis the associated conditions *e.g.*, obesity, high blood pressure, gout etc. are to be taken into consideration. Physiology teaches that half of the uric acid in the blood is exogenous, being derived from the food whereas the other half is endogenous and originates from the breakdown of mucleo proteins of the body tissues. Foods rich in nuclei *e.g.*, meat, liver, kidney, brain, pulses etc., are particularly harmful both in osteoarthritis and gout. Increase of fat at the expense of carbohydrates in the diet is said to reduce uric acid formation in the body

Gentlemen, before apologisting for detaining you so long, I like to refer, in short to the role of vitamins in disease.

Deficiency Diseases

A gradually increasing knowledge about the vitamins in the recent years has been a boon both in preventing and combating the so-called deficiency diseases. The importance of diet in this group of diseases is paramount.

Xerophthalmia and acquired night-blindedness which arise from a deficiency of A vitamin in the food are now being successfully prevented and cured by ensuring a free supply of foods rich in this particular type of vitamin. Since the power of A vitamin in influencing the development of Epithelial structures of the body has been established, it is being beneficially used as an anti-infective agent specially in some respiratory diseases *e.g.* Pneumonia, whooping cough, measles etc. The chief sources of A vitamin in the common foodstuffs is from livers of certain mammals and fish, especially cod and halibut, dairy products from well fed animals, eggs, animal fat, fish roe etc. Carolin, the precursor from which A vitamin can be elaborated in the body is found fairly in the yellow pigment-present in the vegetable foods *e.g.*, Yellow root vegetables, green leaves and many coloured fruits and seeds.

The antineuritic B. vitamin has been largely used with unique success in preventing and curing cases of *Beri Beri*. Nutritional anaemia of children and constipation are also supposed to be benefited by it. Vitamin B can prevent and cure pellagra. The common foodstuffs rich in B vitamin are cereals, egg yolk, meat, pulses, fresh vegetables, fruits, germinating seeds, malt extract and yeast.

Scurvy has now been almost a disease of the past by the addition of antiscorbutic C vitamin-rich substances *e.g.*, lemons, oranges, tomatoes, grapes, radish, onion etc. in the dietary.

Prevention and cure of Rickets and Dental caries depend mainly on three essential factors.

(1) Liberal supply of D vitamin.

(2) Sufficient supply of calcium and phosphorus.

(3) A healthy internal secretion of the Parathyroid glands. Vitamin D differs from other accessory food factors in its relative paucity in common foods. It is present fairly in egg yolk, butter, cod and Halibut liver oil. Ergosterol, its precursor when exposed to ultraviolet rays produces D vitamins. Normally Ergosterol present in our skin is transformed into D vitamin by the ultraviolet rays of the sun. For this, exposure to sun's rays in bare skin is necessary. It is really a pity that children in India where sun's rays are so abundant all the year round, should suffer so much from rickets, dental caries, marasmus, stunted growth etc. If, as routine procedure, all children are exposed to the sun's rays daily as was our time-honoured

practice here before, the incidence of these diseases will surely be less and less. Certain foodstuffs *e.g.*, cereals, actively interfere with bone and tooth calcification. Because they promote growth without supplying to bones a proper amount of phosphorus, calcium and calcifying D vitamin, they tend to produce rickets and dental caries. Hence the necessity of diminishing the intake of cereals by growing children. Calciferol the artificially produced D vitamin is a convenient supplement where much of D vitamin containing foods cannot be supplied for some reason or other. But the regulation of its dose is very important as over-dose causes toxic symptoms.

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A Few Practical Hints on Cataract Operation to the Beginner*

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IT is a simple operation if done properly on a suitable patient. It needs full co-operation between the operator, his assistants and the patient. It requires great patience not only on the part of the patient but also on that of the operator, who must be calm at all moments and not liable to lose temper when difficulties happen to arise. It is a question of just a few minutes and this may restore a blind man to perfect sight or doom him to everlasting darkness as far as that eye goes. Here the operator usually cannot undo any error on his part or any fault on that of the patient while on the table or afterwards. This makes the task more difficult and throws heavy responsibility on the Surgeon. So, the following practical hints are given that they may prove to be of some help to the budding ophthalmic surgeon and make his path smooth. Success in his first case would embolden him and insure success in his career.

1. *Selection of a patient.*

(1) Select a properly mature cataract case. The rough test for a properly mature cataract is that the patient can correctly make out the movements of a hand, but cannot count fingers. In other words he should have not only good perception but good projection as well. In addition his colour sensation should be normal.

(2) Pupil should react to light.

(3) Iris should be clear and lustrous and there should be no circumcorneal injection.

(4) Shadow of the iris on the lens should be absent.

(5) There should be no apparent infection of any part of the eye or its surroundings.

(6) He should not be suffering from any disease which prevents him from lying down flat or causes cough, sneezing, or vomiting.

(7) See if the cataract is soft or hard, for on it would depend

* Specially contributed to the Antiseptic.

the length of the incision. Following table may help in deciding, though it is not always that correct idea is got.

SOFT CATARACT.	HARD CATARACT.
(*a*) Blue-white hue.	(*a*) Light amber tint, varies from white to black.
(*b*) Flocculent appearance like sheen of mother-of-pearls.	(*b*) Radially striated texture.
(*c*) Anterior chamber shallow.	(*c*) Anterior chamber normal.
(*d*) With oblique illumination the nucleus may be visible as dark reflex emanating from the depth of the lens. It is less dark.	(*d*) This reflex is more dark (reddish or brownish).

(8) If possible the first case should be one who has perfect faith in his doctor and would listen to him with blind faith. An old servant of the family would perhaps be most suitable.

(9) A prominent eye is more easy to handle than a deep setted one, which requires some experience to make our incision and operate upon successfully.

(10) A nervous patient or one who is in the habit of squeezing his eye should not be attempted by the beginner, and it is always safe to give a dose of a suitable sedative to control nervousness.

2. *Sterilization.*

Perfect aspesis should be the aim of an ophthalmic surgeon. Even the slightest flaw in this is likely to mar the perfect operative procedure, so, too much stress cannot be laid on this. No antiseptic should be allowed to enter the interior of the eye, so, all the cutting instruments sterilized in antiseptics like carbolic acid lotion should always be washed with sterilized distilled water before arranging them in a tray. While sterilizing, every care should be taken to save the point of the knife. It is very easy to damage it and without a sharp point, the knife is no good. It is gently put in a suitable rectangular tray (6", 3", 1½") containing sterilized cotton wool at its bottom and the sterilizing lotion poured over it. Care should be taken while putting it in and lifting it out.

3. *Preparation of the patient.*

In a properly selected case, no preparation worth the name

is required. The patient can be put straightaway on the table after washing his eyes with mercury lotion (1 in 2000) administering a sedative and painting tincture iodine on the lids and surroundings. But, if any sepsis in the eye or its surrounding part is suspected, then the eye should be bandaged for 24 hours and the result seen. If the lids open readily by themselves and there is no discharge, then the eye is fit for operation.

For carrying the patient back from the table to his bed, a strong durree should be converted into a stretcher by folding the sides lengthwise to make loops for putting in poles and stitching these two folds with strong thread. This durree is to be spread on the operating table and after the operation, poles can be pushed into the loops and the patient can be easily lifted off the table and brought to his bed. This durree should be allowed to remain under him on the bed till he sits up. But before spreading it on the table, it should be tested if the stitches would stand the weight of the patient. If this be not done and the stitches happen to be not strong, they may give way and let the patient fall down on the ground while he is being lifted off the table and spoil the whole show. To make it look decent and also to make it comfortable, a suitably folded bed sheet may be spread on the durree.

It is not desirable on the part of the assistant to give any instructions to the patient to do this and not to do that while on the table. It makes him all the more nervous. Queries of the patient should always be answered by the surgeon himself to reassure him and win his confidence. Eye patient is always in a hesitating mood, and would try all sorts of excuses to slip away.

Before putting the patient on the table he should be asked to put on only those clean clothes to which he is used while going to bed. In this part of the country the people sleep without any garment on their trunk and if such patient is operated upon with a shirt on, next day the surgeon would be surprised to see his patient without that on his body. Not being accustomed to it, the patient feels uncomfortable and cannot sleep with that on, so he manages at night to take it out. This exertion is likely to affect his wound. While on the table, such a patient can be covered with a bed sheet and a light blanket.

4. *Assistant.*

If possible, the surgeon should have an experienced assistant who has helped some ophthalmic surgeon and has picked up this sort of work. Failing this, the new surgeon should depend upon

himself mostly, rather than incur the risk of a cumbersome assistant.

5. *Instruments.*

Properly selected instruments would go a long way.

(1) Speculum—Self retaining Smith's speculum is most suitable. It can be easily removed when required.

(2) Fixation Forceps— Straight one is easy to handle.

(3) Knife—It should be Graefes of Weiss make, with a narrow blade of short length. Too broad or too long blade is not desirable. The knife should be rigid. The point should always be tested on a drum before sterilizing it. If the knife goes down the drum by its own weight without producing any noise, it is suitable ; but the one that causes noise when the point goes down the drum should be rejected.

(4) Iris Forceps—The points should be inspected. If the apposition be not perfect, it would not grip properly and may lacerate the iris and prove a source of great annoyance while in use.

(5) Iris Scissors—Bent one and of Weiss make should be selected.

(6) Capsule Forceps—of good make should be selected.

(7) Capsulotome—Weiss make and one combined with spoon would be economical.

(8) Lens Hook and Strabismus hook—of proper strength and with suitable bents are to be selected.

(9) Iris Repositor—comparatively cheap variety would do. Slightly bent one is to be preferred.

(10) Vectis—one with a big loop is to be avoided.

(11) Lastly, I always like to have a small straight metallic tongue depressor or spatula for spreading ointment on the swabs which are to be put on the eyes after operation.

The instruments after sterilizing should be arranged in a sterilized rectangular tray on a dry sterilized towel in the order in which they are required in the consecutive steps of the operation. It ensures speed and minimises chances of mistakes in picking up wrong instruments.

6. *Anaesthesia.*

Local anaesthesia is the best and works well in most cases.

After washing the eyes, a drop of freshly prepared and properly sterilized cocaine solution 4% is dropped every two minutes for 5 times. The patient should be asked to keep his eyes shut as the cocaine solution dries the cornea by diminishing the frequency of winking. Slight dilatation of the pupil is a sign that the anaesthetic has acted

Some surgeons in addition infiltrate the eyelids with novocain solution and others inject this solution into facial nerve below the tragus of the ear. For anaesthetising the iris, some surgeons inject this solution into the orbit behind the eye ball by introducing the needle by the outer side of the eyeball. These procedures generally are not needed in properly selected patients.

7. *Table.*

It should be narrow—not more than 2 feet wide and 2 feet 10 inches high. It should be heavy and not on castors so that it cannot be shifted inadvertently during the operation. The pillow should be a thin one and 10 inches broad. It should support the patient's head, neck and part of his shoulders. The head should not hang on it nor should it be lifted too much forward. This position should throw maximum light on the eyes. The table should be placed in such a position that the operator faces the source of light if it be coming from a wall. During the operation the head of the patient should be supported against the operator's pit of stomach and the hands holding the instruments should also control the side to side movements of the head by properly keeping it in place.

The arrangements of light in the operation room should be perfect.

8. *Operation.*

Before starting the operation the eyes should be washed again with the same lotion coming from a height to combine the effect of the lotion with the mechanical cleaning by the stream coming from a height. The inner and the outer canthi are stroked with wet cotton swabs.

It is advisable that the beginner should practise the extraction of lens in fresh goat's or sheep's eyes. Such eyes can be fixed in wax or simply holding the eye in the left hand and handling the instruments with the right hand would do. It would give him an idea of the size of incision that is likely to help and how easy is it for the lens to come out when capsulotomy is done and how much force is required to break the zonule and make the extraction within the capsule, also when the vitreous is likely to

escape and lastly how the upkeep of the pressure is likely to increase this loss. It would convince him then that the easier method of extraction to adopt would be the combined Daviel's (capsulotomy) operation.

Details of the operation are unnecessary and out of place; so only the practical points likely to help the beginner would be given.

The instrument must be handled with extreme delicacy so that one may feel what is being done.

1. INCISION.—Having adjusted the patient's head properly on the pillow and having fixed it against one's pit of stomach and the other eye covered with a swab, the first and the most important step of the operation *viz.* the incision is begun. On it would depend mostly the subsequent steps of the operation which go a long way towards the success of the operation. Efforts should be made to make the incision between one-half to two-fifth of the circumference (upper side). Less than one third would not do and more than half would be dangerous. For making the incision on the right eye, the operator stands behind the patient's head but, for the left eye, he goes to the left side of the patient facing him. For all subsequent steps he stands behind the patient's head. Before introducing the knife, one should always see if the cutting edge is facing upwards. The knife is introduced at the limbus-a shade above the equator line of the cornea and at an angle of 30°. When the point is visible in the anterior chamber, the handle is depressed to make it horizontal and then, let it move on till the the limbus is reached on the other side, when it is depressed to make a counter puncture. The knife is pushed a little further and worked upwards in the horizontal plane cutting the cornea at the limbus. Efforts should be made to finish the incision at the corneo-scleral junction by bringing the knife edge forward and taking it out quickly to avoid a conjunctival flap, which is difficult to handle subsequently especially when one is not accustomed to it. As soon as the knife has come out, the fixation forceps should be removed. If the fixation forceps have slipped out before the incision is complete, it may be finished at the cornea. The same will have to be done if the patient is unmanageable and starts squeezing. The fluid that has come out should be sponged.

2. IRIDECTOMY.—The next step *viz.*, Iridectomy is a bit painful to the patient and is likely to make him nervous as a painless operation had been promised to him and so here would

be appreciated the advantage of having a properly selected patient who has blind faith in his doctor and is less likely to get unruly and can easily be reassured. The patient is asked just to look down towards his feet without moving his head, while the iris forceps is being introduced to grip the edge of the iris. Only the upper edge of the iris brought out is to be cut clean with sharp scissors, to get a neat small Caloboma. The remaining iris is stroked back with the repositor, if it has not already gone in. If this is done properly there should be no bleeding, but if the iris had been pulled out violently and the patient has started squeezing, then there would be some bleeding from laceration of the iris and this would blur the field and the subsequent steps may not be clearly visible especially the capsule. The blood clots should be stroked out with a lens hook.

3. CAPSULOTOMY.—The best way to do is to introduce a closed capsulotomy forceps into the eye and let it open when it reaches the centre of the pupil area and then grip as much of the capsule in its arms as it can with only a light pressure and bring it out. Efforts should be made not to press the lens back lest the Zonule may give way and dislocate the lens. If the capsulotome is to be used, then it should be introduced with its cutting point on horizontal plane lest it should get entangled. When the point is visible in the centre of the pupil, it is turned back and a complete horizontal line made on the capsule with it. Some surgeons make vertical line as well and thus get a complete cross. The instrument is brought out as it was introduced in *i. e.*, with the cutting point on horizontal plane, otherwise, the iris is likely to come with it.

4. EXTRACTION OF LENS.—Now if a trained assistant is at hand the speculum can be removed and he lifts the upper lid upon a squint hook with his right hand and pulls down the lower lid with his left thumb, standing on the left of the patient. If a trained assistant be not available, then the speculum may be left in and it can be lifted by an assistant take away its pressure from the eye ball, if the vitreous threatens to escape in the subsequent steps. While lifting it up its arms should remain apart as much as before, otherwise it is likely to come out. Now with the spoon on the left hand, gentle pressure is applied on the eye-ball above the centre of the sclero corneal section while with the lens hook in the right hand a carefully adjusted counter pressure is applied below, at the junction of the middle and lower third of the cornea. A gentle but steady

and not heavy pressure is applied at first backward and when the lens edge is seen near the wound, the pressure follows the lens by sliding the hook over the cornea right up to the wound, maintaining the same pressure all through. The pressure is to be kept up till at least 2/3 of the lens has come out, otherwise, it is liable to slip back. When the lens is out, one should look in for any shreds of the capsule and if seen, efforts should be made to take them out by repeated gentle stroking with a lens-hook on the cornea, as if massing them out. By this procedure there is little likelihood of any vitreous escaping especially when the speculum has been lifted up because the posterior part of the capsule and hyaloid membrane are intact. Sometimes, it is more convenient to introduce a closed iris forceps and actually grip the shreds and bring them out.

Another method of removing them is by washing them out with sterilized normal saline, but generally this method is not recommended as it is not free from dangers.

5. REPOSITION OF THE IRIS.—By gentle stroking at the angles with the repositor, the iris goes in easily. The other place where the iris is likely to get adhered is the under surface of the scleral flap, and the repositor should always be drawn right across it.

6. TOILET.—Now all that is required is to clean the parts gently and remove the speculum carefully, telling the patient to close his eyes gently as if he is going to sleep.

Both the eyes are covered with swabs besmeared with sterilized yellow ointment 1 % or sterilized vaseline. While the operation is going on these sterilized swabs are allowed to remain in the mercury lotion for extra antiseptic precaution and assuring their proper moulding on the parts, and just before use the lotion is squeezed out of them and the ointment applied. Sometimes the patient insists on our covering only the operated eye. This should never be listened to and both eyes are to be covered. If one remains out of the bandage, the patient naturally would use it and there is always a tendency for similar movements in the closed eye and this is likely to disturb the wound and delay healing.

Over the swabs is adjusted some wet sterilized cotton wool and over it some sterilized dry cotton wool and all are held in place with a figure of 8 bandage. While bandaging, the head of the patient is raised a little above the pillow and supported against one's lower part of chest and the patient is asked not to exert himself in any way. When the bandage is finished one should see if there is any pressure on the nose or lower and upper parts of the

ear and the patient may be asked if it is comfortable all round as it is to stay on for at least 8 days.

Now the poles are fitted into the loops of the durree and two men lift him off the table while the third person (nurse) holds the head in place on the pillow with her two hands on the sides of the head and thus all these three carry him to his bed. When the cross bars of the stretcher are being removed, the poles are held apart to prevent giving a sudden jerk, to the patient. He is now instructed to remain flat on his back in the horizontal position till he is allowed by the doctor to sit up and told that he would be supplied with bottle and bed pan when required and fed by the nurse in that position. Of course, he can be allowed to bend his knees whenever he feels inclined to do.

7. DIET.—The patient should not come to the table with loaded stomach as it would make him more liable to vomit especially when a sedative like Liq. Morphia is administered to him. The patient is fed with milk from a feeding cup while lying and this feeding is to be carried on till he is allowed to sit up, when he can have at first soft food and later his usual diet.

8. AFTER TREATMENT.—On the second day, generally, he feels a colicy pain in his abdomen for which he should be given a dose of Carminative Mixture with Tincture Belladonna and this may be repeated as required. That day he may also complain of stiff back and desire to sit. This can be relieved by just rolling a hand on his back and assuring him that he would be allowed to sit up early next morning. But if he develops cough and there is a chance of his devolping congestion in the bases of his lungs, he may be allowed to sit up after 24 hours against a back rest and pillow, for half an hour.

As a routine he is made to sit up against a back rest and pillow on the third day and a dose of castor oil in milk is administered, if the patient is constipated.

On the third day the patient generally complains of heaviness in head and also an uneasiness or actual pain in the eye. These usually pass off when the opening dose moves him. If full relief is not obtained, then a dose of aspirin and caffein citras is sure to relieve him.

The patient is not to be worried till full eight days after the operation and a little longer if the incision had been corneal, unless of course if the dressings have slipped when they should be readjusted without inspecting the eye or if some serious complication *e.g.* sepsis as may be evident from oedema etc., has set in. After that period, the bandage is removed in a dark room, as the

patient is very intolerant to light. If all is well as it should be, then the swabs fall off themselves and the patient is asked to open his eyes gently. The wound should be inspected by telling him to look down, while the upper lid is being pulled upwards. The slight soreness present is eased with hot boric fomentations for a few minutes. After this a drop of zinc boric eye drop is put in each eye and the operated eye provided with a green shade. The patient remains in a dark room for some days and is given fomentation and eye drops, and after a few days he is allowed to come out before sun-rise and after sun-set. A hospital patient can be discharged on or about the 11th day. He carries on with this shade for 40 days and then he is provided with suitable glasses. He is not allowed to read or write for about three months.

9. ACCIDENTS DURING THE OPERATION.

(1) The conjunctiva may tear where it is held by the fixation forceps which may come off before the incision is completed. In this case the operator will have to finish the incision on the cornea where he can.

(2) The lens may be shot out and the vitreous follow it, when the incision is just completed. This generally takes place in a nervous patient who squeezes his eyes violently. The surgeon should be quick to remove the fixation forceps and the speculum. If that is done quickly, no serious harm may result. Slight loss of vitreous is of little consequence. In this case reposition of iris is most difficult. Generally, it goes in by itself as no iridectomy has been done. If it has not gone in, then, the upper lid may be raised on a strabismus hook and efforts made to replace it back with the repositor.

(3) Loss of Vitreous. It generally occurs when the lens is being extracted. If the speculum is in, it should either be raised or better be taken out. Generally, it goes back. Slight loss does not matter much. Any protruding head of it may be snipped off otherwise it would keep the wound open and prevent healing. In some cases, on account of the fluidity of the vitreous, there are more chances of its escape and for the lens to get dislocated.

(4) Lens may get dislocated. Efforts should be made to bring it out by introducing a Vectis behind it, taking help of a magnifying lens to locate it if necessary. In this case loss of vitreous must occur.

(5) Haemorrhage.

(*a*) Small. It is not of much consequence though it blurs the field. It should be stroked out with a lens hook.

(*b*) Expulsive This is serious and it generally takes place in case of high tension *e.g.* from glaucoma; so on no account should such a case be touched, for nothing can be done to control it. The eye is lost.

10. COMPLICATION AFTER OPERATION.

(1) Prolapse of iris. It is one of the most common complications. If the prolapse be little, it may get sealed into the wound by keeping the eye covered for a few days more. If this is not successful then it will have to be excised completely after waiting for a fortnight.

(2) Iritis and Iridocyclites. These are treated with hot fomentation. Dropping atrophine lotion and administering mercury.

(3) Glaucoma. It may be treated with hot fomentation, leeches on the forehead and temple, purging and if necessary tapping the anterior chamber by introducing a knife in it.

(4) Sepsis. This is most serious and unfortunate. The eye is lost. It may need evisceration.

HOSPITAL

Here pain is sent to sleep as tenderly
As with its rise and fall the breast draws breath;
And armor out of sure dexterity
Is fashioned for the vanquishing of Death.
Here faith and resolution grow more strong
To meet the tides that sweep against the soul;
The heart assures itself, "'Twill not be long,"
And patience weaves the torn threads to a whole.

Life renews itself myriad ways
Not all known to the lens, the stethoscope.
There is an understanding sight that stays
The blade and spares the fragile bloom of hope
To blossom in a richer, freer soil.
Such is the goal of this unfaltering toil.

—*Eleanor Alletta Chaffee.*
Hygeia, May 1935.

Some Continuous Remittent Pyrexias*

BY

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General Remarks

INSPITE of rapid advances during recent years in the methods of diagnosis—Bacteriological, Serological etc., there are occasions, not unoften, when the physician is confronted with continuous remittent types of fever which tax his ingenuity, skill, and clinical knowledge to arrive at any definite conclusion with regard to the causation of the febrile condition. I am afraid, the advent of the Laboratory has not been of unmitigated good to the profession. It has insidiously replaced the clinical sense which used to be cultivated and "cultured" to a high degree of efficiency by the clinician. The clinical consciousness which called forth the inherent powers of observation, critical analysis, the inductive and deductive faculties of the mind, in the bedside comprehensive study of the case, is gradually disappearing and more reliance is being placed on the artificial props supplied by the Laboratory. But is the profession a gainer in the exchange? Can the props adequately and effectively substitute the natural clinical sense? In the ultimate striking of accounts, I am afraid, the profession would be faced with a deficit budget with a balance on the debit side.

It is a matter of common knowledge that negative results from the Laboratory do not count for anything. It is only the positive findings in any bacteriological or serological test that can be conclusive. How many times, slide under the microscope may reveal nothing while the clinical signs and symptoms unmistakeably point to malaria or relapsing fever. How often the Laboratory reports "negative widal in any dilution" though the clinical data indicate enteric group of fevers? Take for instance the plating of urine and stools. "This routine method involves much work for comparatively few positive findings. In the first place bacilluria occurs after the fourteenth day as a general rule and cultivation from fæces will only succeed in about 5% of cases in which it is attempted". Again "a few cases of enteric especially paratyphoid A, may fail to develop agglutinine and continue to give a misleading negative widal reaction throughout". Undue importance cannot be attached to the agglutinin fluctuation test as "some undoubted cases of enteric fail to give this fluctuation,

* Specially contributed to the Antiseptic.

while some cases of fevers shown conclusively not to be enteric, give a characteristic rise and fall in the inoculation agglutinins". So the claims of the Laboratory are not vindicated by the established facts. It may supplement in certain cases but cannot supplant the clinical data.

Again, one would like to know the percentage of cases in which the Laboratory aid and assistance can be available to the general practitioner with a moderate busy practice. He may snatch some little time to examine a slide here and there for malaria or relapsing fever but can he invariably do so in all cases under his care and can such hurried examinations with negative results be regarded as conclusive? As for the proper bacteriological and serological work he must possess a well-equipped Laboratory of his own and must be prepared to devote lot of time and attention or arrange with some institution in the town doing such work. The number of times that the serum test may have to be repeated, the frequency of blood withdrawals coupled, often times, with conscientious objections and prejudices on the part of the patient and his relations and the amount of time, energy and patience required for this work and despite all that show of doing much for the patient, without any material mitigation of his actual disease processes, make the whole procedure impracticable and prohibitive from financial, physical and curative point of view. This elaborate process may be well suited for hospital patients with a well equipped clinical laboratory and an able assistant. Occasionally, a consultant, to justify his high fees, may make all this stir and commotion, and once in a way, make a blood film or take a blood capsule to impress the patient with his "advertised" greatness and speciality. But it can never repay an ordinary practitioner and the parlous purse of his patients to indulge in these costly luxuries, without any substantial gain accruing therefrom in seven cases out ef ten.

Enough has been said in the foregoing paragraphs to bring home the fact that in overwhelming majority of cases in a general routine practice it is the clinical picture studied in all its details carefully and assiduously which will help the physician to arrive at an approximately correct diagnosis supplemented if easily and cheaply available and practicable by microscopic and cultural examination of blood etc. It is for this purpose that I would urge with all the emphasis at my command that the clinical sense and bedside observation powers should be imbibed, practised and perfected to their full and the Laboratory to be given only a second place in our armoury of diagnosis of diseases. Full, frank and

free use should be made of the senses of sight, hearing and touch in their order of preference.

In a period of about 4 months I had the opportunity to observe clinically about a dozen cases of remittent fevers and the following remarks are mainly based on these observations:—

Differential Diagnosis

Given a case of fever of a continuous, remittent type, a careful, systematic physical examination of every organ and region of the body, record of pulse, temperature and respiratory rate must be made. The importance of such a comprehensive examination cannot be over-estimated. It is by such thorough and pains-taking bed-side study of the case that many cases of "Puzzling pyrexias can be unravelled and correct diagnosis clinched.

There are five cardinal signs to guide us:—

1. PYREXIA:—Generally the fever has lasted for a few days. Minute details of history may reveal whether the fever is attended with a rigor or not during the forenoon or afternoon. If no quinine has been given, blood examination may be helpful but "Parasites may only be found after a prolonged search". The pyrexia may show great variation, high or low, with great or small remissions. In tropical countries where malaria is endemic, its super-imposition on any other infection like enteric, relapsing fever or pneumonia is always a possibility and should be remembered.

Case No. 1.—I was called to see a case in the suburb; a Hindu youth aged 28 years suffering from remittent type of fever since the last 6 days. Maximum temperature recorded was 105 and minimum 100.2 F. with cough and slight blood stained expectoration observed once or twice-suspected case of lung trouble. Careful examination showed few rales at the bases of the lungs on both sides but no signs of actual consolidation in the lungs. Pulse respiration ratio was undisturbed. The fever started with a rigor in the beginning. There was slight enlargement of the spleen, no abdominal symptoms except constipation relieved by laxatives. In the absence of any other ascertainable cause, I took a blood slide and injected g.10 quinine in sachharose Sol. intramuscularly and left my instructions with the local doctor in charge of the case. The report was recieved that the fever had touched the normal 12 hours after the injection. The blood film confirmed heavy malignant tertian infection.

2. PULSE-TEMPERATURE RATIO.—In enteric group of fevers it is a valuable sign.

Normal pulse-temperature ratio may be tabulated as under:—

Pulse	50	60	70	80	90	100	110	120	130	140
Temp.	96	97	98	99	100	101	102	103	104	105

In enteric group of fevers pulse is 15 to 40 beats per minute slower than thus indicated (Mansons)

MORRIS'S ATROPINE TEST.—Is of distinct diagnostic value. This depends on the fact that a hypodermic injection of atropine sulphate 1/33 Gr. is followed by a rise in the pulse rate amounting to at least 15 beats per minute. Whereas in enteric no such rise follows.

Technique.—"Pt. should lie horizontally and remain at perfect rest. He should not be tested till at least one hour has elapsed since the last meals. The pulse rate should be counted for at least 10 minutes and then 1/33 Gr of atropine should be injected over the triceps region. After an interval of 25 minutes the pulse should be counted again minute by minute, until it is clear that any rise which may have followed the injection has begun to pass off. The period of the disease during which the test is most reliable is said to be the 5th day to the end of the second week".

3. TOXÆMIA.—An enteric patient has a "dull, heavy toxin-laden appearance in the early acute stages of the disease which an experienced clinician can recognise easily". This is more marked in case of typhoid than paratyphoid infections. Clinically an average typhoid patient looks more toxic, has higher temperature with smaller morning remissions. There is little abdominal distension in paratyphoid and constipation is the rule generally in children. Out of the 7 cases of the enteric group observed by me only one child aged 13 years had classical signs of typhoid and the temperature lasted for 51 days; the other six also in children, were clinically paratyphoid infections: temperature coming down by lysis from 14th to 27th day.

4. SPLENIC ENLARGEMENT.—Slight degree of enlargement in the enteric group of cases is a common feature. The enlargement is acute and the organ is tender to touch. Enlargement lasts for short duration. In the seven cases of the enteric group I could observe enlargement of spleen only in four. This enlargement of the spleen must be distinguished from previous enlargement of the organ due to malaria. "It may become palpable as early as 2nd or 3rd day or not till the 2nd or 3rd week or it may remain enlarged long into convalescence."

5. RASHES.—These can be observed clearly on fair skins but not on dark skins. I have failed to find it in large number of cases of enteric group. Usually rash appears in the beginning of second week, as 'rose spots' on the neck and upper part of the chest. In summer season prickly heat spots are likely to be mistaken for true rash.

"The poly morphous rash of *typhus* has to be distinguished from the more florid exanthem of dengue. The primary *dengue* rash has a diffuse reddish hue; the secondary is rubecloid or patchy, as it may be termed: interspersed with areas of normal skin. Petechia or dusky mottling of the entire skin may occur in cerebro-spinal fever."

"The papules of *small pox* may be felt before they can be seen especially on the forehead. Small pox tends to appear first on the pressure areas, thighs, sacrum etc."

Measles.—Rash bas a predilection for face and forehead and appears on the fourth day of the disease. It is of a "Dull-brick red colour, consisting of innumerable flea-bite spots slightly raised above the surface".

Scarlet Fever.—Rash appears on the 2nd day on neck and upper part of the body. The rash "is uniformly red, it disappears on pressure but instantly returns." It lasts for a short time, reaching its height by the end of the third or beginning of the 4th day of illness and totally disappearing on the 4th day."

Chickenpox.—Rash appears on the chest or back as a "number of little red pimples, which on the second day fill with fluid. On the third day they have attained their maximum size and present an appearance as though the patient had been subjected to a shower of boiling water which had left behind a number of small almost clear blisters. On the 5th day the vesicles begin to dry up. On the 8th or 9th day the crusts thus formed commence to fall off."

Some Pyrexias Resembling Enteric

Case No. II.—One case of mine, an adult Hindu male which, to all intents and purposes, appeared to be a case of paratyphoid with a continuous remittent temperature for the last week rising to 103.4 in the afternoon, falling to 100 or so in the morning hours with slow pulse in relation to temperature, slightly furred tongue, at the back with red margins and tip, was removed to the local civil Hospital and the examination of the faeces revealed intestinal infection with B. Faecalis alkaligenes. "This is a common inhabitant of the intestinal canal, where it is not definitely known to exert any pathogenic action."

There are two other diseases with regard to which I would like to draw pertinent attention. Great confusion may arise as both present continued pyrexia and likely to be mistaken for enteric with grave consequences on the ultimate prognosis of the case.

Pneumonia.—Attention may not be attracted by any respiratory disturbance in the early stages. Physical examination of the lungs may not reveal any signs especially if the trouble starts deep in the organ. This is particularly difficult to detect in children as the subjective information is lacking. Repeated careful examination and watching of the pulse-respiration ratio, general toxic manifestations in the early stages in the absence of any other ascertainable cause may focus the attention of the lungs.

Case III. Visited a child aged about 18 months with continuous fever for the last 3 days with slight morning remission. The previous medical colleague had left the diagnosis of paratyphoid. Minute examination of the lungs with almost imperceptible working of the alae hasi, flush on the right cheek, greater prostration and weakness than warranted by paratyphoid of 3 days duration indicated to me to treat the case as tentative one of lungs involvement which it ultimately proved to be such. Application of antiphlogistine to the suspected side would very often clarify the physical signs in the chest and clinch the diagnosis as it did in this case within 24 hours.

Liver Abscess.—A continued remittent pyrexia of a long duration with marked morning remissions associated "with a peculiar pallor of the face. rigors, profuse sweats and it may be, symptoms of involvement of the right lung" should arouse strong suspicion of hepatitis going to suppuration; careful study of four-hourly temperature chart is a very useful adjunct in such cases.

Case No. IV. A middle aged Hindu lady came under my observation for remittent pyrexia of 3 weeks duration with morning temperature of 99 or 100 and evening rise to 101 or 102.4. Her Widal's reaction was reported negative. There was no history of cough, but she complained of pain under the right axilla with slight laboured breathing. Physical examination revealed few friction sounds on the right side at the base. I gave a tentative diagnosis of dry pleurisy probably tuberculous in nature. After few days treatment the patient changed hands and was lost sight of. After about 3 weeks I was consulted again. This time, after thorough examination and study of the temperature chart, liver abscess was spotted with a distinct fulness in the right hypochondrium which was absent at the first consultation. Differential count in the early stages when the patient first came under observation might have thrown some light on the case and this was unfortunately missed, partly, due to the fact, as is the bane of private practice, patient was not under my care for more than 4 days and was changing hands in rapid succession passing the gauntlet of about 10 doctors, vaids and hakims during a short space of 7 weeks.

Treatment—There is no golden rule as regards treatment of such remittent types of pyrexia; it is mainly symptomatic at the discretion of the medical attendant. Malaria may be a co-existing complication in the beginning or at any subsequent stage and should be taken note of. Having clinically excluded as far as possible pneumonia, liver abscess etc. and having made the emunctories function freely, I generally start with small doses of quinine in chlorine water with liq Hydrarg Perchlor. This therapeutic exhibition of quinine serves as a preliminary clinical test even if the blood film is negative, and settles the diagnosis. If, say gr. 20 of quinine in 24 hours fail to influence the temperature in the slightest degree, malaria can safely be ruled out.

In the event of the enteric group of fevers as indicated by the temperature chart and other cardinal signs it is mainly the regulation of diet, nursing and general hygiene of the patient that has to be attended to. Mist chlorinata may be continued but usually I change to Tr. Iodine Rect, together with Gly-carbolic in distilled water. Chlorine mixture is apt to cause some Bronchitis especially in children probably due to irritation of the mucosa by chlorine. This can be minimised by addition of plenty of glucose D. to every dose of the mixture. I order Glucose D. to be liberally used with the dose of medicine and even otherwise in water, milk, barley water etc. This regime, if there is no complication calling for a change, is continued till the end of second or beginning of third week. In a straightforward paratyphoid infection there is defervescence in the general symptoms of the disease by this time: abdomen is flat, temperature shows more fluctuation, general outlook is hopeful. The patient may be put on simple alkaline mixture like Pot cit etc. I have found it a useful change at the fag end of the disease which soothes the patient considerably changing the highly acid urine into alkaline one and hastening the lysis in the temperature. In one instance such a change had a dramatic effect. In a typical case of paratyphoid in the 3rd week, the evening temperature of 103° F. came down to 99.4° F. within 36 hours of the exhibition of grs. 15 Pot cit every 3 hours. I have tried it in several other cases and have never been disappointed in the choice.

Hexamine may be given in the second week but in certain percentage of cases it causes hæmaturia to the great discomfort of the patient and discomfiture of the medical attendant. But I have given fairly big doses with Soda Bicarb in powder form without any untoward accident which may appear rather unorthodoxical.

In long continued pyrexia of typhoid infection, change of mixture after a week or so has a salutary effect on the course of of the disease, though drugs generally occupy a secondary place in the care of the patient.

Omnadin the much lauded remedy in infectious conditions of this nature has not yielded encouraging results in my experience. Vaccine therapy has come into vogue of late but I have not tried this line of treatment enough to vouchsafe any opinion for or against it.

The management of convalescence especially in paratyphoid infection which is the most common in this part of the country, calls for special care as relapses are frequent and return to solid diet and normal mode of life and activity should be guarded and gradual.

The rest of the treatment is symptomatic in the absence of any specific for such kind of pyrexia.

Any detailed description of the complications and their treatment is clearly out of the scope of this article.

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Malaria Therapy with Special Reference to Neutral Flavine*

BY

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FROM 1st December 1934 to 31st January 1935, I have made careful records of 119 patients of whom 22 were treated with Quinine, 20 with Atebrin (orally), 27 with Neutral Flavine and 50 with Quinine and Neutral Flavine. I have followed up these cases up to date. The accompanying table shows the results of the treatment.

In order to evaluate the comparative efficacy of the drugs used I have classified the cases into (1) mild (2) severe and (3) moribund. The cases are far too few to be of much value for drawing any significant conclusions and I give them for what they are worth. Moribund cases were those which on admission were semi-conscious or completely unconscious, with one or more of the following complications *viz.* very high temperature, subnormal temperature, small running pulse, anuria, albuminuria, diabetes, persistent hiccough, bronchitis, pneumonia, dysentery and cardio-vascular diseases. I therefore doubt some if not all of them being true cases of cerebral malaria. The cerebral symptoms were probably due to the complications.

All the 119 cases were under my observation for a period ranging from 4 to 6 months from the date of their coming under my treatment. Blood films were examined in all these cases from time to time. During the first half of December, *Quinine* and *Atebrin* were administered orally to two sets of patients. Quinine was administered orally, (21 grains daily for 5 days or more). On the second or the third day if there was no marked improvement or if the mixture could not be taken, intramuscular injections of 20 grains of Quinine-bi-hydrochloride dissolved in 15 c. c. of distilled water and sterilized were given into the upper and outer quadrant of buttock, away from the hip joint avoiding gluteal vessels and nerves, sciatic and cutaneous nerves. By following this technique closely, I was able to avoid severe local pain, induration or sloughing. Usually 2 or 3 injections were sufficient to bring down the temperature to normal, but relapses were common, (about 50 %). Atebrin for injection was available only, in tablet form at the time when the epidemic started. These tablets

* A paper read before the British Medical Association (C. B.) on 19-6-'35 and specially sent to 'The Antiseptic' for publication.

dissolved with difficulty and the daily injections advised caused much pain. Atebrin tablets gr. 1½ each, 3 a day, were given orally for a week. In the majority of cases, the temperature dropped but not below 100 or 99, occasionally rose again during the course of treatment. Relapse rate within four months was 25%.

Neutral Flavine.—One intra-venous injection daily or on alternate days of 10 to 20 c.c. of 1 % solution of Trypa-Flavine was given. In the majority of cases the drop in the temperature was rapid after 2 to 4 injections. The injections were well tolerated. In a very few cases there was troublesome nausea or vomiting. The yellow staining of the skin and all the secretions of the patients were much more pronounced than in cases treated with Atebrin, but it was of no consequence whatever. Given slowly, nausea was less.

The actual cost of the drug (Bayer's Trypaflavine) for four injections works out at 6 cents (1½ cents per injection). This injection has to be given with extra care. It is far better not to try to inject into a difficult vein. In such cases Atebrin Mussonate is preferable. Only about 8% relapsed during 4 months.

Combined Treatment with Quinine and Trypaflavine.—50 cases were treated with Quinine (intra-muscularly) and Trypaflavine (intra-venously). Generally, 2 Quinine injections and 4 Trypaflavine injections were administered. The patients stood the injections very well, and no untoward symptoms were noticed; nausea and vomiting were present in some for 24 hours, but was easily controlled. I believe that this combined treatment is both schizonticidal and gametocidal more than any other anti-malarial treatment in my experience. It is very important that the liver and the kidneys should be carefully watched during the period of treatment.

Before closing, may I be permitted to make a few remarks on the obscure action of these drugs. The great importance of Quinine in our armamentarium in our fight against malaria, is even to-day well recognised and quinine still remains in our hands the queen of anti-malarial remedies. Sir Patrick Manson's dictum that failure to prescribe Quinine in cases of malaria is culpable negligence, still holds good, only with more emphasis. Cinchona has been known years ago for its curative virtues by the native of Peru, who was instrumental in the preparation and distribution of the powdered bark. Before that time it appears to have been a secret formula in the hands of Jesuit Priests stationed in Peru. The shortage of Quinine during the Great War led the German Scientists to evolve 12,000 synthetic drugs. Of these, Plasmoquine

and Erion later known as Atebrin have been found to be therapeutically good for malaria. Plasmoquine was found to have a specific action on the crescents. It was found by experience that it was not safe to issue Plasmoquine to patients indiscriminately because there is no safe limit to its dosage, as the therapeutic and toxic doses almost merge into each other. Cyanosis and cardiac and gastric symptoms were caused even with .04 grm daily (Sinton) and .02 grm. is the dose contained in each tablet. The recent commission of the League of Nations' Health organization consisting of a group of continental Experts are reluctant to recommend the drug. Sarkar and Banerji are using this drug in the Public Health Department of Bengal with satisfactory results. Clemeshaw and Moore have reported success in a Tea estate in Travancore in South India. *Atebrin* originally known as Erion taken orally is not toxic. The yellow stain is harmless. Elimination is slow. But it is not a crescenticide although relapses are not so common after a course of Atebrin as in the cases of Quinine. I am of opinion that larger doses and longer treatment will probably reduce the relapse rate. It is a useful drug in advanced cases of pregnancy and nephritis. I have no experience of Atebrin Mussonate as it was not available during this period of my investigations. Instead I used Trypaflavine—a twin sister of Atebrin. In fact Yatren, Bayers 205, Chinosol, Dimol, Scarlet Red etc., are coaltar products which are bactericidal, Flavine being the most potent even in the presence of Serum. Atebrin, Plasmoquine and quinine are the three derivatives of 6-methoxy-quinotin which in Atebrin is changed to acridin. The side chains of Atebrin and Plasmoquin are identical. We thus find that the agents reputed to act against malaria are all flourescent which may give us a clue to their cabbalistic action on malaria and allied diseases. One authority on Malaria has proved that active radiation from these drugs may be demonstrated in the blood of malarial patients by the use of an Electrometer. This theory which explains the action of these drugs on plasmodia is very attractive. Flourescence and radiation which are present in these acridine products seem to stimulate cellular activity as is the case with Radium & X rays. Otherwise it is difficult to explain how Quinine obtained in the concentration of 1 in 20,000, in the blood stream can have any parasiticidal action when in vitro a concentration of over 1 in 3,000 is required to kill the hæmatazoon. In epidemics such as the one we are passing through there is only one drug which can be depended upon for mass

treatment. If intelligently used, Quinine will considerably lower our appalling mortality figures. After all most deaths especially among the children and the aged occur during a *crisis* and very few die of relapses. Whenever oral administration is slow or uncertain in acting intra-muscular or intra-venous routes are always available. In Panama, half the success in ridding malaria was due to Quinine injections. In support of the free and unrestricted use of Quinine during an epidemic, the following is what the Malaria Commission of the League of Nations state in their third General Report. "There is a general concensus of opinion that for treating *primary* attacks, Atebrin is more effective than Quinine. The question which drug to select for treating primary attacks cannot at present be stated so definitely, as between the therapeutic effect of Quinine hydrochloride and of Atebrin not much difference can be observed. The commission do not consider that for the treatment of *primary* attacks preference should be given more to Atebrin than to Quinine. As yet there is not at our disposal any drug or combination of drugs which can be guaranteed to sterilize all the parasites in the human host and so to prevent the possibility of relapses. For this reason no good purpose is served by endeavouring to bring about sterilization of all parasites during the *primary* attack. In nature relapses cease to occur when the defensive mechanism of the host has acquired sufficient power to overcome the fever".

With the combined treatment with Quinine and Trypaflavine already discussed, I see a possibility of sterilization of the parasites in the human body, and it is with this object in view I ventured to present the results of my observations, and I trust that some of your readers who have better opportunities for research will carry out further investigations.

Classification of Cases of Malaria Treated

Drug used.	Mild.	Severe.	Moribund.	Parasites found	Relapsed.	Died.
Quinine ...	15	5	2	10	12	2
Atebrin (Oral) ...	10	10	0	8	5	0
Neutral Flavine ...	15	10	2	12	2	0
N. Flavine and Quinine ...	35	10	5	26	0	0
Total ...	75	35	9	56	19	2

CASES AND COMMENTS

A Case of Hydrocele Treated with Quinine Injection

BY

Y. SITHARAMIAH, L. M. P.

Physician and Surgeon, Rampella P. O.

ON 22-5-33 A Hindu male aged about 35 years came to me for the treatment of an acquired vaginal hydrocele of the right side.

Previous history.—About 2 years ago the patient noticed one day, swelling of the right side of his testes with pain as a result of some irritation caused by jumping. The swelling gradually increased. The pain subsided after applying some country medicines but the swelling persisted to remain and any external application of medicine was not of any use. So he came to me for consultation and treatment.

General condition.—The man was quite healthy and had no other complaint except the above. Local examination.—On inspection the swelling appeared to be a round Pyriform one in the right scrotum. On palpation it was found to be tense and fluctuation was present. Above the rounded upper part of the swelling the cord could be felt. On pressure behind the swelling, marked testicular sensation could be elicited. There was no impulse on coughing. On percussion, dulness was present.

Treatment.—I advised the patient at first to undergo a radical operation for the same. But he did not give his consent for operation. I thought of treating the case by means of Quinine injections as I read in an article, "A radical cure for hydrocele" by B. L. Sarma on Page 51 of "The Antiseptic" January 1930.

The patient was made to lie down as he was too nervous and an uneducated rustic. The part was cleaned and sterilised by means of spirit Rectificatus and the tumour was firmly grasped in the palm of the left hand and a spot at the antero-inferior margin free from vessels as possible was selected. Acid carbolic pure was applied at the spot and a fine sterilized trocar and cannula was inserted almost directly upwards. After withdrawing the whole fluid through the cannula, 10 c.c. of a sterilised solution containing 20 gr. of Quinine bihydrochlor and 1 gr. of Acid salicylic was injected into the sac by inserting the needle into the cannula. (Here a 10 c. c. syringe with a needle 2½ inches long was used and warm solution of Quinine was used at the time of

injection.) After injecting the whole solution the needle and cannula were removed, the puncture was rubbed well and a Benzoin seal applied. The part was slowly manipulated so that the injected fluid may spread throughout the sac. A T. bandage was applied suspending the scrotum therein. The patient was advised to use a suspensory bandage for about a fortnight.

He came to the dispensary on 4-6-33 and showed me the part which had almost reduced to its normal size.

Conclusion.—(1) I think it is worth trying injection method of treatment in all cases of hydrocele where a radical operation is not possible or where the patient refuses to undergo a radical operation.

(2) The method is simple, painless and without any bad after-effects.

Treatment of Oriental Sore

BY

KEDAR NATH ANAND, L. C. P. & S.,

X Rayist I-c Dispensary, Pali, Marwar.

Local Treatment

1. *Medicinal.*

(1) BERBERINE SULPH.—Injection of 1 c.c. of 1% solution of Berberine sulph is given around the Sore every week. The punctures being subsequently sealed with collodion. The cure is effected after 6 or 7 injections generally. Berberine Sulph. exerts bactericidal effect over Leishman-Donovan bodies. The sore which has been caused by them naturally heals up.

(2) EMETIN HYDROCHLORIDE.—A 1 c. c. of 2% solution of Emetin Hydrochloride should be injected either into the diseased focus or 1 c.c. in all of the Solutions injected at four points around the Sore. Three or four injections given at weekly intervals are needed to effect a cure.

3) MAG SULPH :—Lint soaked in 25% solution of mag sulph is applied over the Sore, covered over with oiled silk or if it is not available plantain leaf will do. The dressing is changed twice a day. In very foul cases two or three hot Pot. Permanganas baths daily to the part are useful in conjunction with this treatment.

2. *Surgical*:—Good results have been obtained from vigorous application of a sharp Volkman spoon, drying and thorough application of carbolic acid followed by Boric fomentation or better Mag Sulph fomentation.

3. *X-Rays*:—The exposure to X-Rays every fortnight has been found to be of some value in cases of Oriental Sores. Generally 3 or 4 exposures are required.

4. *Ionization*:—Ionization with antimony ions has been tried with marked success and is worthy of trial.

INTRAVENOUS THERAPY:—Antimony tartrotum or its salt. Sodium antimony tartrotum 5 to 10 c.c. of 1% of Tartar Emetic in Saline or distilled water are given daily until 15 to 20 injections are given. These injections have also yielded fairly good results.

Out of all the treatments written above, the treatment with Berberine Sulph is extremely useful, simple, cheap and effective and is worthy of trial on a large scale.

A Case of Typhoid Fever with all its Complications

BY

Captain DIWAN SINGH BHALLA, M.B., B.S.,

Physician and Surgeon, Registered Medical Practitioner, Rawalpindi.

I WAS called in to see a patient aged 12, on 29-5-35, who had been suffering from fever since 27th May, 1935. On examination, I found that he had slight temperature about 99, throat somewhat congested, pulse 72, and tongue coated in the centre and red at the apex and margins. There was another case in the same family, a girl of 14, suffering from Typhoid fever since last 7 days. The whole family used to take soap and water enema whenever any of the members had constipation. Besides these, two other girls were also suffering from fever, out of which one was having bad throat and the other girl was presumed to be suffering from mild attack of Para typhoid fever.

To the boy, I prescribed ordinary fever mixture, every 4 hours, and glycerine enema to evacuate his bowels, as he had no motion since last 2 days. The boy had very good physique. His attendants were warned not to have any of his utensils in contact with those of the other girl, who was suffering from typhoid fever, and also to keep him in a separate room. In this family during these days, there were atleast 60 to 70 persons who had

assembled on the marriage ceremony of one or two of the family members.

My advice to segregate the boy was not carried out on account of less number of rooms and more number of persons in the house. So the boy and the girl were kept in the same room.

Next day I ordered syp: Dimol. drl. twice a day for the boy, and the girl was under the treatment of some one else.

For about 8 days after 30-5-35., I did not go to the child's house, as all of them were busy with the marriage ceremonies. I was informed on 7-6-'35 that the patients had been put on simple Ayurvedic waters as Arq. Kazban and Gulab *i.e.* Rose water, under the guidance of some local Hakim. From the 7th onwards, the girl became very weak, developed Pneumonia and expired on 13—6—35, after an illness of 21 days. The boy was removed from that room a few days before the death of his sister.

From 13—6—35, onwards the boy was under the treatment of some other doctor who put him on plane treatment *i.e.*, rest in bed, occasional doses of fever mixture, ice application to the head, and Liq : Paraffin by mouth for his constipation.

Meanwhile two other children also got typhoid fever. One of these died on 19-6-35, and the other developed signs of severe Dysentery. Their family doctor went out of station on some urgent work, and in his absence I was called on the night of 26—6—35, to see the Dysenteric child. This child was very weak, thin and emaciated, and unconscious. His pulse was very rapid, and general condition very alarming. I gave him an injection of Digitalin and strychnine hypodermically. This little child is the younger brother of the boy who has been suffering from typhoid fever.

In the morning, I went to see the little child, and found his condition much better. The same injection was repeated. This little child was put on Yatren 105 by their family doctor for his dysentery, but became worse. Then Anti-dysenteric serm was tried, which decreased the number of stools. In the evening his condition was again very bad. He was given about 3 ounces of normal saline subcutaneously in both the flanks. With this the child who was only 1¼ yrs. old improved much, and since then he was on the uphill, but in the next few days he developed hypostatic pneumonia. Now, any medicine which was given to him caused great distress, and increased the number of dysenteric motions. All the medicines failed to check his dysentery excepting the Bacte Intestinal and Bacte Dysenteric Phages (A. F. D.), which had a marvellous effect. The dysentery was cured,

temperature lowered, general condition improved, and the lung condition was improved by the application of Thermogen Wool. In all the child got about 12 ampoules of each Bacteriophage. Now the child is quite alright, has put on weight, and is walking and kicking.

It was on 27th June evening, that the other boy began showing signs of complication, while we were busy in saline infusion of the little child. We were informed that the temperature had gone unusually high. In the axilla it was found to be 106. Cold sponging was given every ½ hour but to no effect. Ice was applied to the head and nape of neck throughout. Also he was given the following mixture every two hours, along with hydrotherapy ;—Caff : Cit Gras 2 — Phenacetin Grs. 2— Brandy Min 20—Spt : Amm : Arom : Min 20—Tr. Digitalis : Min 5, and Aqua add Oz 1. With this, his Hyperpyrexia was controlled to some extent, and after 4 or 5 hours his temperature came down to 104 in the axilla, and remained the same for 3 days more with the aid of Hydrotherapy. His pulse was 120.

Here I may point out that in the whole town Typhoid Fever was in an Epidemic form then. No house was without it. So all the members of the family were given anti-typhoid course as a prophylactic measure.

Haemorrhage

On 1-7-35, early in the morning, I was informed that the boy had passed three motions all containing bright red blood. I was alarmed to hear that and rushed to his rescue. The cause of the haemorrhage was found to be the obstinate nature of the boy, who, so far, used to pass his stools by getting up and sometimes out of his bed, which we had been discouraging. This was the 34th day of his disease. At once I sent for my senior consultant, Dr. Harnam Singh Chhachhi, D. M. O., N. W. Railway, under whose able guidance I was successful in curing this case from this fatal complication and others as well.

The boy was put to complete rest in bed. All feedings were stopped except iced milk diluted with water and iced Glucose D in water. Ice bag was applied to the stomach and abdomen. ¼ gr. of Morphia was given hypodermically. Now for hyperpyrexia, only ice applications to the head were resorted to, and cold spongings were stopped. At 10 a.m, 10 c.c. of 10% Ca Cl. were given I. V. For the maintenance of heart all the stimulants were stopped and only Camphor Oil in Ether in 1 c.c. doses was given

every 4 hours hypodermically. Till 6 p. m. he passed no motion, but his abdomen was distending slowly, showing further signs of oozing inside. So 10 c.c. of Normal Horse Serum was given I. M. and 40 c.c. of 10% Sterile Gelatine was given per rectum. Also Tr. Opii Min. 7 with Driof Syp: Tolu in an ounce of water by mouth. As the temperature was very high, Pyramidon Gr. 2 with Caf: Cit: Gr. 2 was ordered every two hours, till the temperature came down to 103.5.

2-7-35:—No motion. One dose of opium was repeated. 10 c.c. of 10% Ca Cl. was given I. V., and one more enema of 40 c.c. of 40% sterile gelatine was given. Camphor in Oil with ether was continued every 6 hrs. The general condition of the boy was better, oozing stopped. On this day, all over the chest rhonchi and crepitations were heard, for which Lin. Turpentine was ordered. Temperature in the axilla was minimum 100.4 and maximum 104.5. Pulse 120. From 2-7-35 to 4-7-35 he was only given injections of Camphor in Oil with ether every 8 hrs. During all this period the temperature remained between 102 and 105 Pulse was constant *i. e.*, 120. On the evening of 4-7-35, he passed a liquid tarry motion containing small fæcal (yellow) masses here and there. This tarry colour changed into normal yellow by the 7th instant. Besides this he was put on the following mixture:

(1) ℞ Amm. Carb. ... grs. 3.
Caff. Cit. ... grs. 3.
Sod. Benz. ... grs. 7.
Liq. Amm. Acet. ... drs. 2.
Syp. Tolu. ... dr. 1.
Aq. Camph. ... ad. oz. 1
Sig. T. D. S.

(2) ℞ Cardiazol ½ c.c.
Sig. T. D. S.

(3) ℞ Quin. Hyd. ... gr. 1½ in a capsule.
Sig. One capsule 4 times a day.

Toxæmia and Pneumonia

On 7-7-35 he showed signs of severe toxæmia and the case was more or less hopeless. His colon was washed with condy and normal saline daily and again camphor in oil with ether 1 c.c. injections were given 8 hrly, 6 hrly, or 4 hrly, as needed. For two days he remained unconscious. On the evening of 8-7-'35, he began talking incoherently, and there was some tympanitis, for which hot turpentine stupes were applied. Temperature was high. He was put on the following by way of internal medicines:—

(1) ℞ Pot. Cit ... Grs. 15
Pot. Bicarb ... Grs. 10
Liq. Amm. Acet. ... Dr. 1½
Vin. Ipecac ... Min 5
Syp. Tolu. ... Min 40
Spt. Aeth. Nit ... Min 15
Aq. Camph. ad ... Oz. 1
Sig. Every 4 hours.

(2) ℞ Digifortis ... Min 4
Sig. Every 4 hrs.

(3) ℞ Hexamine ... Gr. 5
Amon. Chloride ... Gr. 3
Hyd. Cum Creta ... Gr. 1½
Sig. B. D. S.

Temperature remained 105.5 in the axilla, so ice applications were applied over the head and nape of the neck. Blocks of ice were placed at suitable places in the room to control the weather temperature and 10 c. c. of 10% CaCl were given intravenously. Along with this, 10 c. c. of C. I. N. S. 4% (Crookes) were started I. V. daily. Comphor-in-oil with Ether was continued as usual. After the 2nd injection of C. I. N. S. the boy came round and temp. fell to 99.4 on 10-7-35. This treatment was continued till next day, and the result of it was that the temperature ranged between 99. 5 and 103. For the troublesome cough during night, teaspoon doses of Glykeron were ordered and he was put on pot. Iod. *cum* Creosote mixture. This treatment was carried upto 15-7-35 along with daily Colon Irrigation.

Bed Sores

During this period he developed *Bed Sores* on his back, which were attended to by Scarlet Red ointment and Tr. Benzoin co. As a daily routine he was given sponges once or twice a day as needed, and Lin. Turpentine was rubbed over his chest and back. By way of diet, he was given throughout, plain citrated milk, barley water, Sanatogen, curd, Horlick's malted milk and ordinary tap water, chicken essence and fruit juices. On 15-7-35, C. I. N. S. was out of stock throughout the town, and had to be ordered to Lahore from where also I could not get .4% solu i.e. C. I. N. S. and instead I could get only .2% solution. So the temperature remained persistent between 101° and 103° upto 18-7-35, on which date 10 c.c.

of 2% solution of collosal Iodine was given I. V. With this injection temperature at once came down to 99.5°. This was his 51st day of illness. His veins became collapsed, so further injections of Iodine were abandoned to a subsequent date. Temp. remained between 99° and 102. upto 23-7-35, Glycerine enema was given on 23-7-35, as he was heavily constipated and another I. V. injection of .2% C. I. solution was given, the result of which was that the temperature did not go beyond 101°. From 16-7-35 onwards he was also given the following medicines internally :—

(1) ℞	Thiocol (Roche)	...	grs. 4.
	Mucilage Acacia	...	qs.
	Tr. Nux Vomica	...	♏ v.
	Tr. Digitalis	...	♏ v.
	Tr. Scilla	...	♏ x.
	Spt. Ammon Aromat	...	♏ xv.
	Syp. Tolu	...	ʒ i.
	Aq chlor ad	...	℥ i.

Send such 3 doses and put 6 marks.
Sig. one mark 4 times a day.

(2) ℞	Hexamine	...	gr. 10.
	Acid sod. phosph	...	gr. 10.

Mft. pulv.
Sig. T. D. S.

From 20-7-35, quinine hydrochlor gr. 2 was added to the mixture, while omitting Spt. amm. aromat.

On 24-7-'35 (57th day), another injection of collosal Iodine 2% solution was given i. v. and temp. came down to 97°F. and in the evening rose to 101°. This state of affairs continued for 2 or 3 days. His lungs were examined on 28-7-35, a slight patch of infections was detected in the right apex. In the morning an additional dose of effervescence quinine gr. 5 was started, and injections of colloidal calcium with ostelein and Vitamin D alternating with collosal Iodine 1% in 1 c.c. doses were also started every third day.

By 3-8-35, his temperature was normal both morning and evening and the patch cleared by 6-8-35. He was ordered 20 m. of Syp Easton, Syp glycoph co, Syp Ferri Iod, Syp calcii luetoph, and Syp Ca hypoph, each, twice a day. The liquid diet was increased slowly and vegetable soups were also allowed. He was propped upon pillows on 8-8-35. Injections of calcium

and Iodine were continued. Thiocol mixture was stopped and the following was given instead :—

(1) ℞	Ca lactate	...	gr. 5
	Guaia col Carb	...	gr. 2
	Quin. Hyd	...	gr. 1
	Mucilage	...	os.
	Tr. Gentian Co	...	♏ x
	Tr. Nuxvom	...	♏ iii
	aq	...	ad ʒi

Sig T. D. S.

(2) ℞	Hexamine	...	gr. 10
	Acid Soda phosph	...	gr. 10

Sig. T. D. S.

On 10-8-35, he complained of pain while passing urine, so Hexamine powders were stopped.

On 11-8-35, he did some physical and mental exertions and took two glaxo biscuits without permission. At night time he complained of severe pain in both of his legs and knee and the temp. went upto 101.5° Pains were mainly in the muscles, for which light massage was ordered with *Amar* Tel*, an indigenous preparation, which is very useful in all cases of pain and as first aid dressing, because it has got Hæmostatic, analgesic and antiseptic properties.

Relapse

From 12-8-35, temperature used to be normal in the morning and high in the evening, which more or less assumed the form of a Typhoid Relapse. Everything was stopped excepting glycerine Enema daily for the evacuation of his bowels and Nujol, in two teaspoon doses twice a day. He stopped taking diet and even rejected milk and ovaltine. So he was put on Palentol, which he liked very much and also fruit juices were given occasionally. Temp. remained between 99° and 103.5 on 23-8-35, the 13th day of relapse and 87th day of disease, the temp. came to subnormal in the morning and 102 in the evening. It was normal throughout the day on 27th August, 1935 on the 17th day of relapse and 91st day of the disease.

Notes :—(1) C. I. N. S. .4 % solution, should always be tried, whenever there is persistent temperature along with lung complications. In this case it is clearly seen, whenever

* This oil is prepared by the Amar Pharmacy of Abdullapur, Dist Ambala, whose sole distributors are Bhalla Brothers, Chemists, Rawalpindi.

an injection of collosal iodine was given, there was a marked fall in the temp. and distinct improvement in general condition. If .8 % solution be available, one or two injections of that may also be given. By bringing this iodine preparation in the market, the Crooke's Laboratories have done a great service to the medical profession.

(2) Bacteriophages are worth trying in all cases of dysentery and other intestinal troubles, but its high cost is a bar for its too much use, because sometimes one has to use 3 or 4 ampoules in a day and one ampoule costs not less than 10 as.

(3) In haemorrhage where there is hyperpyrexia as well, one should never give cold sponging, as it stimulates the blood circulation. Gelatine enema must be given in such cases.

(4) This case I have sent for publication because it is very seldom that we get such a typhoid case with all its complications in private practice.

In the end, I am very much grateful to Dr. Harnam Singh, Chhachhi D. M. O.—N. W. Railway, who has been very kindly giving me advice whenever needed.

THE PHRENIC SIGN OF APPENDICITIS

M. O. Iliescu describes what he claims to be a nearly certain indication of appendicitis. It is shown by the pain following fairly firm pressure with the index finger on the right phrenic nerve about the middle of the triangle formed by the two divisions of the sterno-mastoid. Iliescu elicited it in every one of 150 cases of acute appendicitis and he attributes it to the irritation of lymphangitis ascending from the seat of trouble. In view of the frequent confusion between inflammations of the appendix and the adnexa, he comments on its absence in the latter. But it was positive in the peritonitis due to appendicitis and in its gastric or duodenal complications. Again the sign was not present under the sedative application of ice to the ileo-caecal region nor after an appendix operation. (*Paris; Bulletin de l'Academie de Medecine.)*—MEDICAL WORLD.

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EDITORIAL

Allergy

The term, Allergy, was first applied by Von Pirquet to a state of hypersensitivity, such as is seen when foreign proteins are injected, but it is now used to embrace a large number of states. The most striking example of hypersensitivity is seen in anaphylaxis. The effects which may be produced are capillary dilatation with an oedematous infiltration of tissues and a constriction of smooth muscle, especially of the bronchi. The actual symptom complained of depends, however, on the part of the body affected.

The state of hypersensitivity may show itself as a purely local phenomenon, as has long been known in relation to the dermatitis and eczema produced by local application of a sensitizing agent. The reaction here may be two-fold, and it is considered that, whereas an ezcematous reaction always indicates an epidermal sensitization, an urticarial reaction is a neurovascular response.

A most remarkable fact regarding local hypersensitivity is that once an area has become sensitive, a reaction may be produced by application at a distance. The serum of "A," who is sensitive to lobster is injected into skin of the arm of 'B.' Thereafter, whenever the latter takes that particular variety he is liable, in certain circumstances, to a reaction in his arm at the site of the injection. Another feature seems to be that once a general sensitivity to an article of diet has been produced, even minute quantities may later bring about a marked reaction.

It has been commonly imagined that foreign proteins must always be concerned in these hypersensitive phenomena, but it has now become evident that this is not necessarily the case. A vast number of substances have now been incriminated, even cold, light and metals. It is now understood, however, that although the causal agent may itself be purely physical it may bring about changes in the local proteins which then become capable of acting as foreign proteins.

Why some persons should become hypersensitive and others not, is a problem which has not yet been solved. Many theories have tried to account for cases of allergy in which no sensitizing dose has been discovered. It is now generally agreed that allergic states run in families, but there is also little doubt that hypersensitivity can also be acquired. If allergy is considered to be heredity and dependent upon an inherited physical weakness, a real cure is practically impossible, although a cessation of symptoms may be caused by continued or intermittent treatment. That complete cures do take place rather supports the acquired aspect. Various means by which a hypersensitivity may be acquired have been suggested on the basis of experiments. It has been found possible, for example, to sensitize animals to a foreign protein if the intestinal mucous membrane has been damaged by inflammatory states. Since such states are common in childhood especially teething, it is suggested that at this period large quantities of foreign protein enter the circulation and bring about sensitization. Once the patient is sensitive, minute quantities of the sensitizing substance may bring about a reaction. The emanation of practically every plant and animal has at one time or other been found to be a sensitizing agent, and commonly patients are sensitive to several different proteins at the same time Ordinary house dust may be a mixture of several varieties, and may lead to multiple sensitization, but it is becoming evident that once a subject is sensitive to one protein he is very liable to become sensitive to others, especially if they are of similar origin.

Generalised Hypersensitivity has been found to have localizing factors. This localization has been regarded as due to local damage. For example, in a child sensitive to cow's milk, a severe towelling or accidental superficial irritation while the abnormal protein is circulating, may be responsible for an attack of eczema which is found to occur subsequently. In the case of asthma also some bronchial infection may determine the localization, and the first attack of asthma is commonly related to an

infection in this region. It is also proved that local damage or irritation is not, by itself, fully responsible. The cure of infantile eczema by dietetic measures and the fact that all Bronchitis does not result in asthma is in support of this.

It is also a well known fact that although a subject is hypersensitive, he may be free from symptoms—he may be a potential asthmatic, yet he may never have asthma, or he may be potentially eczematous but never develop the condition if there is no localizing factor.

It is also commonly believed that the skin and bronchi are the commonest seats of allergic reactions, but the large muscle mass of the uterus must not be forgotten as a possible seat and it is quite possible that, in the near future, gynaecologists may consider dysmenorrhoea as an allergic state.

Of the fundamental changes which occur in hypersensitivity we know very little, and theory as yet predominates. It would seem, however, that the reaction is intimately concerned with cell activity and a highly complex reaction occurs in response to abnormal protein in the blood. Since, however, it is apparently possible to sensitize all normal animals or normal human skin, it would seem reasonable to believe that at some time all human subjects have been liable to such sensitization, but since not all are allergic it must also be assumed that some have become desensitized as a normal process. It is reasonable to suggest then, that the failure of the desensitization may depend on hereditary factors, and since simple ionic changes play such a large part in the fundamental cell reaction, it may be that a simple error of metabolism or a deficiency of some substance, even of a particular ion, such as Potassium or Manganese, may hold up the necessary reaction. The exact nature of the processes of sensitization and therapeutic desensitization is not therefore necessarily the fundamental problem in allergy, but rather the failure of the normal desensitization.

It has been abundantly shown that, once a hypersensitivity is established, the sensitive tissue may react with greater ease to nervous as well as to chemical stimuli. Some cases of asthma are undoubtedly benefitted by removal of sources of irritation, for example, in the nose. Another undoubted fact is that once a reaction has been established the patient learns to expect a reaction in certain circumstances. Dermatologists therefore assert that psychology plays a much larger part in skin complaints than has hitherto been suspected. Such a complication is easily understood on the simple basis of association. That psychological

treatment is of as much importance as the treatment of the allergy is without doubt.

The Editors of the 'Practitioner' have to be congratulated on bringing out a special number on "Allergic diseases", contributed to by specialists. It is from one of these articles by Prof. R. T. S. McDowall that we have quoted so extensively in the preparation of this note. Those of our readers who want to learn more of this very interesting subject are directed to the 1935 May number of our distinguished London contemporary.

In no subject better than in allergy is there greater abundance of opportunity for research, for which the co-operation of the laboratory worker and the practitioner is required. As in so many other diseases, the doctor when confronted with an allergic disease like asthma must treat not the state but the patient who suffers from asthma. For a full elucidation of the case much time is necessary—perhaps more than what the general practitioner can afford, but the patient must himself be made to realise that he himself can do much to contribute to the success of the investigation which will ultimately relieve him of his troubles

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GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

Streptococcal Adenitis and Glandular Fever in Children.—H. C. Cameron, M.D., in *Guy's Hospital Gazette*, (of 4th Aug. '34) discusses about this very common disorder of childhood, namely Streptococcal Adenitis, which is inadequately described in text-books and often confused with very different and much less common disorder, Glandular fever. The swelling of the submaxillary and jugular lymphatic glands is secondary to a streptococcal invasion of the tonsils or pharyngeal wall, which may be associated with an acute tonsillitis, follicular, ulcerative, or membranous, or the primary focus in the throat may be so slight and transient that it may be overlooked. But the latter condition of minimal signs of local infection in the throat is the rule, (1) in the tonsillectomised child and (2) in infants under two years of age. Tonsillectomy does not free the child from the risk that he may succumb to an epidemic of streptococcal infection. In the infant and very young child such infections tend to involve the glands quite disproportionately, and in the first two years of life abscess formation is almost to be expected in all but mild cases.

The illness may last from three to six weeks. The glands may swell to a great size, becoming browny and indurated, or may remain separate and discrete, surrounded only by a little œdematous swelling. Glands are painful and tender, and torticollis is present, when glands deep to the sternomastoid muscles are involved. Intermittency of the pyrexia and of other symptoms seems a feature of the disease. After two or three days of high fever, delirium, fretfulness and pain, the child may become comparatively happy, while the pain and swelling of the glands are demonstrably less. Then suddenly the whole illness begins again with renewed force. The only common complication is a hæmorrhagic nephritis. There may be simultaneous involvement of other parts in the streptococcal infection, as Otitis media, mastoid infection, meningitis, membranous rhinitis, antral infection, bronchitis, broncho-pneumonia and dermatitis.

This has to be differentiated from the much rarer disorder, the true glandular fever. It is an acute, infectious, contagious disease occurring generally in childhood, characterised by rapid enlargement of moderate degree of the cervical glands and sometimes of the spleen, the inguinal, axillary and other glands as well. Suppuration is rare. Recovery occurs in a week and mortality is negligible. Symptoms are milder and complications are not met with, as in streptococcal infection. A differential blood count will distinguish glandular fever from streptococcal infection. In the former, mononucleosis, both relative and absolute, as much as 60 to 80 percent of hyphocytosis, is found; but it may be transitory sometimes. In streptococcal adenitis, a comparatively high polymorphonuclear leucocytosis is found. The existence of this mononucleosis in glandular fever, long unsuspected, probably provides the explanation of cases of recovery from leukæmia reported in the past.—*K. L. N. R.*

Dehydration and Acidosis in Gastro-Enteritis.—[Stanley Graham, M.D., F.R.F.P.S. *The Practitioner*, April 1935].

In gastro-enteritis there is frequently acidosis of the "acid poisoning" type present, to which several factors contribute—(1) an excess of loss of base in the motions thus depleting the stores of the alkali available for neutralisation of the acid substances produced in the ordinary course of metabolism; (2) the food is not properly digested or absorbed, with the result that a state of starvation ensues (an excess production of ketone bodies.); (3) the effect of the toxins absorbed from the inflamed bowel, as well as fever, is to disturb the katabolic processes so that

excessive tissue breakdown takes place with the production of an excess of acid substances; (4) the water balance of the body plays an important part in this respect, and that dehydration (anhydraemia) greatly favours the development of acidosis, and in some cases is the precipitating factor.

Dehydration.—In order to provide water (when the tissue fluid is below a certain minimum) the tissue cells are broken down with the production of more acid metabolites, which, in their turn, increase the acidosis. A vicious circle is called into being, dehydration causing acidosis which in turn causes dehydration. Any infection leading to diarrhoea and vomiting not only produces a loss of fluid via the stools and the vomitus, but when the large reserves of glycogen are called upon, all the water stored with glycogen will be lost as well. Such an infant may lose a pound in twenty-four hours and this may represent 5 to 10 per cent of his total weight. Acidosis will almost certainly supervene because of the lack of water essential for the transport and excretion of the salts. Water may be taken from the blood plasme for this purpose and this necessitates a call on the water from the interstitial spaces, the blood volume being kept unchanged as long as possible. An acidosis in the tissues exists due to the accumulation of acid products because water is not available to carry them away. Irreparable damage to actual tissue soon occurs.

Clinical picture:—Fall in weight, semi-consciousness, sleeps with lids partially closed, anterior fontanelle depressed, the skin ashen grey, the mucous membrane dry, loss of normal elasticity of the skin and subcutaneous tissue, weak and rapid pulse, rise of temperature (may be due to infection or dehydration), deep, pauseless and slightly rapid breathing (diagnostic of acidosis). The occurrence of a convulsion is a bad omen as it frequently ushers in the end.

Treatment.—Consists in (i) the restoration of the water and salt reserves; (ii) the provision of alkali; and (iii) the administration of glucose. In mild cases water, normal saline or 10 per cent. glucose in normal saline may be given freely by mouth. In severe cases fluid must be given freely both parenterally and by mouth. The intravenous route is indicated in the most severe cases as its action is the most rapid. The intra-peritoneal route is the most valuable one because it is the safest and easiest. The subcutaneous route seems unnecessarily painful to the patient, the risk of infection is probably greater and, as it takes longer, more exposure of the patient is required. Opinion is divided regarding the advisability of giving alkali in acidosis. The provision of a plentiful supply of sodium chloride along with water will furnish whatever base is necessary. The administration of alkali is at best only palliative and conceivably may be harmful. Glucose, by month or intravenously, will correct ketosis and supply a small amount of easily utilized food. Warmth, stimulants and a minimum of handling and exposure are essential, if success is to be achieved.—K. L. N. R.

Role of sodium in Adrenal Insufficiency.—Robert F. Loeb, Dana W. Atchley and Jules Stahl, New York (*Journal A. M. A.*, June 15, 1935), believe that if adrenal insufficiency in man is not relieved by salt administration, it will not be relieved by commercial cortical extracts given in the usual dosage. It is distinctly hopeful, however, for the future of this type of therapy that the commercial extract is entirely adequate for the healthy survival of the adrenalectomized dog. The studies that they have presented indicate that there is a definite relationship between sodium metabolism and the active principle of the adrenal cortex. When cortical insufficiency develops, the disturbances in sodium metabolism manifest themselves in a number of ways that have significant diagnostic and therapeutic implications. The sodium concentration of the blood is decreased because of an increased rate of sodium excretion. The diagnostic change in the sodium level becomes more apparent and specific when salt is withdrawn from the diet. The withdrawal of salt, however, may result in an adrenal crisis dangerous to the patient. Conversely, the administration of salt will frequently alleviate acute adrenal insufficiency, and the continuation of this therapy mitigates to a considerable extent the signs and symptoms of Addison's disease. When destruction of the adrenal glands is complete, salt alone will not maintain life.—*Texas State Journal of Medicine.*

The Treatment of Gastro-duodenal Ulcers by Histidine.—Stolz and Weiss have employed Histidine in 42 cases to the exclusion of all other therapy, medical or surgical.

It appears to act not only on the painful crisis but also on the rhythm and intensity of the crises.

In 21 cases observed since 1933 remissions have been much prolonged, moreover recurrent attacks have been much less intense, and have yielded rapidly to Histidine. Cicatrisation of the ulcers is said to follow while the mucosa is rendered resistant to the corrosive effect of the digestive juices.

Histidine should not be used to the exclusion of other symptomatic remedies, its essential value is in modifying the soil in which the ulcer develops. Periodic cures are recommended (two or three times a year) both in the presence and in the absence of pain and discomfort.

Histidine should prove of value in cardial ulcers and jejunal ulcers after operation, types of ulceration hitherto difficult to treat. Histidine merits a place apart in the therapy of gastro-duodenal ulcer.—*Le traitement des ulceres gastro-duodenaux humains parl histidine 2 annees d'experience clinique: Societe de Medecine du Bas-Rhein*, Feb. 23, 1935. *Ref. in La Presse Medicale*, No. 43, May 29, 1935, p. 864.—*Thr' Medical World.*

Hiccough (Singultus).—As is well known, hiccough may be both severe and continued. Many remedies are common knowledge among the laity, as for instance, holding the breath, slapping the back, straining with closed glottis. In severe cases narcotics are given:

Potassium bromide, Scopolamine, Atropine, Opium, Morphia, Luminal; or

℞	Extract belladonnæ	...	6.0
	Cocaine hydrochlor	...	0.6
	Aquæ amygdall amar ad	...	20.0

Sig. 8-10 drops thrice daily.

From the writings of Plato, wherein gargling with water is advised and subsequent sniffing of water into the nose in order to induce sneezing from the irritation so produced, Ullrich was led to try the opposite effect, namely, anæsthesia of the nasal mucosa by means of plugs of wool soaked in 2 per cent, pantocain lotion or 10 per cent cocaine. The result of this simple method is rapid. The advantage of pantocain over cocaine is that it is better borne and without ill effects.—*Beitrag zur Singultus Behandlung. Deut. med. Welt.*, No. 18, 1935.—*Thr' Medical World.*

The Treatment of Intestinal Paresis.—For the treatment of intestinal paresis both following abdominal operations and other causes, Prostigmin (Roche) is claimed to possess advantages over Physostigmin. The effect on blood pressure is so slight that physiological limits are not exceeded. The combination of Prostigmin with pituitary preparations is of special utility. The dose is 1-2 c.m.^{3} (daily) intramuscular, intravenous or subcutaneous

A long interval between doses is necessary, although a second dose may occasionally be injected on the same day.

An enema, given 15-20 minutes after the injection and repeated if required, hastens the effect. Prostigmin is sold in ampouls.—*Kreiner: Zur Behandlung der postoperative Darmlahmungen, Wien med. Woch.*, No. 19, May 4, 1935, p. 526.—*Thr' Medical World.*

Treatment of Whooping Cough.—G. Albour Stephens, M.D., B.S., B.SC., (LON.), Swansea, (*The Prescriber*, July, 1935, pp. 224.) writes: It may be worthwhile reminding readers of a treatment for whooping cough which was introduced about 30 years ago and which has been of very great use. It consists in syringing both ears with warm solution of boric acid, and afterwards painting with a 5 to 10% solution of cocaine (or better still procaine) hydrochloride in a mixture of glycerine, 1 part, water 4 parts.

Once the method has been demonstrated, the treatment can be carried out by the nurse or patients.

The rationale of the method is that these drugs anæsthetize the endings of the nerve coming from the upper part of the vagus for the supply of the auditory meatus, which in cases of whooping cough is often irritated and painful; when this irritating focus has been put out of action the vagus is in a better position to control at its other branches and this way cough is relieved.

When I first published this method, I adduced evidence of its efficacy from others as well as myself. I now repeat it in the hope that medical men of a later generation may be induced to give it a trail.

Obstetrics and Gynaecology

Roentgenologic Diagnosis of Placenta Previa.—W. H. Ude and J. A. Urner (*American Journal of Obstetrics and Gynecology*, 29: 667-679. May, 1935) describe their method for roentgenological diagnosis of placenta previa. A Potter-Bucky diaphragm is used: the bladder is emptied by catheter and about 40 c.c. of a sodium iodide solution is instilled; the amount of this opaque medium used must be sufficient to outline the urinary bladder, not to distend it completely. The catheter is withdrawn before making the roentgenogram. The usual anteroposterior film is made with the tube centered over the mid or lower abdomen; a large enough film is made to show the entire fetus. A lateral film has been

found of little value for the actual demonstration of placenta previa, but it may be of indirect aid by establishing the presence of the placenta in the upper segment of the uterus, excluding low implantation. The diagnosis of placenta previa in the abdomino-posterior film depends upon the demonstration of the densities between the bladder margin and the skull of the fetus. Normally this space appears to be only about 6 to 8 mm. in depth, but in placenta previa a wide space or soft tissue mass is shown; in partial placenta previa there may be displacement of the head with a mass on one side. This method is used in cases of abdominal bleeding in the last trimester of pregnancy, and makes it possible to establish a diagnosis of placenta previa without genital contamination. In 14 cases in which diagnosis of placenta previa was made roentgenologically, it was confirmed by clinical and operative findings in all but one instance.—*Medical Times.*

PROCEEDINGS OF SOCIETIES, ASSOCIATIONS ETC.

The Obstetrics and Gynæcological Society of Southern India

The First All-India Obstetric and Gynæcological Congress, 1936.

Under the joint auspices of the Bombay Obstetric and Gynæcological Society and the Obstetric and Gynæcological Society of Southern India, the first All-India Obstetric and Gynæcological Congress will be held at Madras on the 2nd, 3rd and 4th January 1936. The sessions will be devoted to the consideration of subjects under the following three sections:

(1) Obstetric Section.

(2) Gynæcological Section.

(3) Maternity and Child Welfare Section.

There will be organised in this connection a Scientific Exhibition which will include exhibition of scientific appliances, food stuffs, drugs and scientific books.

Members of the medical profession are invited to attend the Congress.

Particulars with regard to the programme will be published later. Those who intend to contribute papers to any of the sections are requested to kindly communicate with the President of the Obst. and Gynæcological Society of S. India, Govt. Hospital for Women and Children, Egmore, Madras.

The All-India Medical Licentiates Association, Madras Branch

The Indian Medical Council Act

To protest against the Indian Medical Council Act of 1933, to urge on the Government of India the necessity for amending the Act so as to include the Indian Medical Licentiates within its purview and to request the Members of the Indian Legislature all over the country to take up this question in right earnest and remedy the wrongs done to the Medical Licentiates as well as the bulk of the Independent Medical profession, were the main points of discussion that arose at a public meeting of the Medical men of Madras held under the auspices of the Madras Branch of the All-India Medical Licentiates' Association on Friday, the 20th September 1935, at 6 P. M. at Gana Mandir, No. 10, Thambu Chetty St., Madras. Dr. V. D. Nimbkar F.R.C.S. presided. The Chairman in his preliminary remarks, while sympathising with the Medical Licentiates in their legitimate grievance of non-inclusion in the Indian Medical Council, pointed out the futility of the All-India Medical Council as it excludes all Indian Medical men with qualifications granted in institutions established by the Government themselves. He further condemned the idea of higher and lower qualifications as conveyed in the Bill for, when viewed carefully, even the M. B. B. S. degree would fall under the category of lower qualifications.

The following resolution was then moved by Dr. D. V. Venkappa, Provincial Secretary, All-India Medical Licentiates Association, Madras: "This general meeting of the Medical Profession of Madras held under the auspices of the Madras Branch of the All-India Medical Licentiates' Association, places on record once again its emphatic protest against the Indian Medical Council Act of 1923 and urges on the Government of India the necessity for amending the Act forthwith so as to include the Indian Medical Licentiates within its purview and thus allay the discontent and dissatisfaction in its rank and file and the bulk of the independent Medical profession. The mover while tracing the origin, growth and the final stages of the All-India Medical Council Bill explained how the vast group of Indian Medical Licentiates—two prominent members of whom, the late Dr. Lohakari, B.A., L.M.P. and Rao Sahib Dr. U. Rama Rao were responsible to give the very idea of the formation of the All-India Medical Council—are left in the back-ground on flimsy grounds of lower qualifications. Here, the speaker pointed out an authority how the Medical qualifications granted in India were in no way inferior to those obtained abroad.

Dr. A. Sreenivasan, M.R.C.P., while agreeing with the views expressed by the mover gladly seconded the resolution. Dr. V. Rama Kamath, Medical Councillor and Editor "Medical Practitioner" Madras, in supporting the resolution spoke at length about the ways and means how our protests could be made felt by the authorities. He suggested how the Members of the Indian Legislature who were responsible for passing the Indian Medical Council Act of 1933 could as well repeal the same provided the members of the Medical profession used their discretion in exercising their votes to only those who would uphold their cause. He further explained how the All-India Medical Council is unwanted in India in view of the immense powers already in existence to the Provincial Medical Councils which have been established on almost the same lines as the British Medical Council. The Doctor opined that by the formation of the All-India Medical Council there is a considerable drain on the public exchequer and which is far in excess of the amount allotted to the Provincial Medical Councils.

Dr. U. Krishna Rao, M.B,B.S., Medical Councillor and Editor, "The Antiseptic" spoke next on the resolution. He gave a vivid picture of the farce when the All-India Medical Council Bill stood at the anvil of the Legislative Assembly. He pointed out how determined the Government were, being influenced by the powers abroad, to get the Bill passed in the teeth of all round protests, both by the profession and the general public. Speaking on the strength of his position as a Medical Practitioner, he observed there could not be any difference regarding the status as independent Medical Practitioners whether they be Medical Licentiates or Graduates and as such he found no reason why the All-India Medical Council should exclude this large body of Medical men who formed the bulk of the Medical profession in India. He further encouraged the members that his paper "The Antiseptic" would always be ready to uphold and fight for the cause of the Medical Licentiates. He further exhorted the audience to observe the 20th of September of every year as the Anti-Indian Medical Council Day until such time as the Medical Licentiates are included within the All-India Medical Council.

Dr. R. Ramanjulu Naidu, Vice-President of the Madras Branch of the All-India Medical Licentiates' Association moved the following resolution:

"This meeting of the Madras Branch of the All-India Medical Licentiates' Association resolves to appeal to the Members of the Indian Legislature all over the country to take up this question

of inclusion of the Indian Medical Licentiates within the All-India Medical Council in right earnest and thus remedy the wrongs done to the Medical Licentiates as well as to the bulk of the independent Medical profession.

Dr. U. D. Gopal Rao, Secretary of the Madras Branch of the All-India Medical Licentiates' Association seconded the resolution.

With a vote of thanks to the chair and the authorities of the hall, the meeting came to a close.

The South Canara District Medical Association

Report on the working of the South Kanara District Medical Association for the year ending 30—6—1935.

The Association has finished its fourth year of existence. The work of the previous year was kept up.

Membership.—The year opened with a membership of 46 on the rolls of which 24 resident and 22 non-resident. During the year 3 new resident members joined, 2 resigned making a total of 25 on rolls on 30-6-1935. Among the non-resident 3 joined making a total of 25 for this class. The total number at the end of the year was 25 resident and 25 non-resident including the Udipi Branch members thus totalling 50 on the rolls.

Finance.—The usual subscriptions of Re. 1/- per month of resident members and Rs. 2/- per half year of non-resident members were collected. Out of a total demand of Rs. 518 including the arrears at the end of the previous year, Rs. 211/- were collected leaving a balance of Rs. 307 as arrears, excluding the amounts written off. The total receipts of the year were Rs. 536-12-2, including an opening balance of Rs. 286-15-8, and expenditure Rs. 266-11-3, leaving a balance of Rs. 270-0-11. Out of this a sum of Rs. 200 has been invested under bye-law No. 7 being the entrance fees, donations, interest on investments, and partly from general funds. It is hoped that the outstandings will be wiped off soon.

Meetings.—There were seven meetings during the year including the Annual General meeting. Of these, two were held in two moffusil centres at the invitation of the medical officers who were the hosts. The members were entertained at these centres and had a very enjoyable time. The Surgeon General with the Government of Madras at his visit to the District was kind enough to meet the members of the Association to tea, when there was a free and frank exchange of views between the Head of the

medical department and the Association. There were two condolence meetings. At one of the business meetings the grievances of Rural medical Practitioners were considered and suitable resolutions were passed. Among the District Associations this is the only Association, that made representations to the Government on behalf of these practitioners, and it is gratifying to note that Government have redressed their grievances. The Association sustained an irreparable loss by the death of Lt. Col. N. A. Mehta, I.M.S., one of its presidents. The Association offers its thanks to the hosts in the moffusil and to the lecturers at the meetings.

Management.—The Executive Committee of the previous year was unanimously re-elected at the Annual General Meeting. There were no changes in personnel during the year. The Committee met thrice during the year to transact business.

Habitation.—The Association offers its thanks to the Government of Madras for kindly allowing them the use of the Wenlock and the Lady Goschen Hospitals for its activities. With great pleasure it records its thanks to the District Medical Officer and his staff for their uniform kindness, courtesy, and help during the year, despite all their personal inconveniences. It is hoped that a permanent habitation will be got early.

Members' Activities :—In the Municipal elections held during the year under report the following members have been elected to the council: Dr. Vittal Shetty, Dr. U. P. Mallya, Dr. H. V. Adappa, Dr. Af. Coelho, Dr. N. Upendra Pai, Dr. S. S. Hegde.

The Association feels proud that Dr. K. Vittal Shetty has been re-elected as Chairman of the Municipal Council for a second term. The Association offers its congratulations to all of them.

The Trichinopoly Dist. Medical Association

A monthly meeting of the above Association was held at 5 P. M., on Saturday the 26th August, '35, at the E. R. High-School, Teppakulam, Trichinopoly, when about 45 members were present. Capt. Sanghamlal, I. M. S., F. R. C. S., District Medical Officer, Trichy, presided and Dr. M. Ramaswamy Pillay of Kattuputhoor was 'At Home' to the members.

Dr. R. Sambasivan, M. B., B. S., demonstrated a case of congenital systolic murmur in a boy aged 12 which was originally demonstraed before the Association three years back when there was failure of compensation. The point of interest in the case was, that in spite of the valvular lesion and failure of compensation previously, the boy was healthy and well developed. He next

demonstrated an interesting and rare case of 'Strepto-thrix' of the lungs. The case simulated one of 'T. P.' but the absence of temperature and the negative sputum under microscope decided the diagnosis.

Capt. Sangham Lal gave case notes of an operation he did a few days back, for strangulated Hernia. The strangulation got relieved before the patient was brought to the theatre and on opening the sac, bloody effusion, was found. Though there were no acute abdominal symptoms an exploratory laparotomy was done when blood coloured serous fluid was found in the peritoneal cavity and about 3 feet of small intestine was found to be kinked. The kink was set right and the abdomen closed.

Dr. R. Sambasivan read an interesting paper on 'Hypo-vitaminosis' and explained how minor deficiencies of various vitamins caused various ailments. He enumerated the different foods with different vitamins. There was an interesting discussion following the paper in which many members took part.

With a vote of thanks proposed by the Secretary to the host, the lecturers and others, the meeting terminated.

The Trichinopoly and Salem Medical Associations

A joint meeting of the above two Associations was held at 5 P. M., on Sunday the 22nd September 1935 at the High-School premises Namakkal. Doctors of Namakkal who were 'At Home' made elaborate and neat arrangements for the reception of members. More than 50 doctors attended. 'Tea' was served at 5 P.M., while gramaphone music was constantly playing. At 5-30 P. M., Dr. P. A. S. Raghavan, the Secretary of the Trichinopoly District Medical Association, in proposing Lt. Col. Bal, I.M.S., District Medical Officer, Salem, to take the chair, thanked the members of the Salem Medical Association for inviting the Trichy Doctors and also thanked the Namakkal doctors for making such excellent arrangements.

Dr. S. Krishnamoorthy Rao, Secretary of the Salem Medical Association, in seconding the proposition said he was glad that such large numbers had gathered at such an out-of-the-way place. Lt. Col. Bal in his opening remarks welcomed the guests from Trichinopoly and called upon Dr. C. E. R. Norman, the president of the Trichy District Medical Association to deliver his lecture on 'Dysentery'.

Dr. Norman delivered an interesting and instructive lecture and explained the pathology, signs, symptoms and treatment of

the two kinds of dysentery. He said the bacillary dysentery was 10 times more common than the amoebic dysentery and children below 6 very rarely get amoebic dysentery. He also said that the Flexner infection was 15 times more common than the Shiga infection. Tracing the pathology of the disease, he explained that the bacilli worked their way from the mucus membrane inside towards the muscular coat whereas the amoeba worked its way out from the sub-mucus coat to the lumen of the bowel. Hence in bacillary dysentery there is a lot of mucous in the stools accompanied by tenesmus, scanty faeces and constitutional symptoms as fever etc., while in amoebic dysentery there is more blood and faeces and less of mucus. Though microscopic examination of the stools will confirm the diagnosis yet it was safer to treat all cases of dysentery as Flexner-bacillary.

Regarding the treatment he said, a preliminary purge with Castor-oil or saline and followed by astringents as Bismuth and Dover's powder at bed time with saline and yatren lavage was useful. He also found Festal an effective medicine for the disease. His routine was to give a mixed vaccine containing Flexer and enterococcus bacilli, and B Coli.

After the lecture there was an interesting discussion in which more than a dozen members took part.

Dr. T. V. S. Shastry of Trichinopoly raised the question whether dysentery was not more common in jails due to deprivation of butter-milk from the diet.

In his concluding remarks Capt. Bal said that as far as his experience of 10 years in the Salem Jail went, deprivation of butter-milk was made up by the supply of mixed diet and vegetables. He also remarked that a mixed infection with amœba and baccilli was very rare.

In proposing a vote of thanks to the hosts, Dr. Raghavan said that this joint meeting was only a preliminary for such meetings in the future and suggested that the neighbouring districts might arrange to have joint meetings at the time of the Annual Gathering of the other district. He also suggested the formation of a committee representing the various district Medical Associations to co-ordinate the activities of the various Medical Associations and also arrange annual conferences, exhibitions, etc., in different districts each year.

Dr. R. Kalamegham, of Trichinopoly appealed to the old boys of the Medical College in particular and to all the doctors and the public in general, to contribute their mite and help to make the centenary of the Madras Medical College a success.

After the meeting terminated the members spent an hour in in-door games such as cards, carroms, and trick games, a number of which were introduced by Capt. Sangham Lal, I.M.S., District Medical Officer, Trichy. After dinner at 9 P M. the gathering broke up with three cheers.

The Krishna Dist. Subsidised Rural Medical Practitioner's Association.

The last meeting of the above Association was held in the Government Hospital, Bezwada at 3-30 P. M. on Sunday the 22nd September, 1935. Lt. Col. K. V. Ramana Rau, I M.S. was expected to preside over the meeting, but during his unavoidable absence, Dr. S. Narayanaswami Iyer, Asst. Surgeon Government Hospital, Bezwada was elected to the Chair. Dr. N. Rama Rau, L.M.P., the Secretary of the Association, read out the minutes of the previous meeting which were duly adopted by the members, and then the members passed the following resolutions unanimously :—

1. This Association requests the Dt. Medical Officer and the President, Dt. Board, Krishna to kindly permit the Rural Medical Practitioners to address the President, Dt. Board, Krishna through the Dt. Medical Officer, whenever they apply for, and report after, casual leave, and thus obviate the necessity and expenditure incurred, for addressing both on the two occasions.

2. This Association respectfully requests the Government to condemn the action of some District Boards which are trying to replace the existing Rural Medical Practitioners by new candidates either stipended by the Boards or otherwise.

3, This Association resolves to request the Government to define the status of the Rural Medical Practitioners in connection with their claims for the travelling and daily allowances when called for to give evidence in courts of law, and requests to classify them as II Class Private Witnesses.

4. Resolved to request the District Board, Krishna to kindly sanction the remuneration due to the Rural Medical Practitioner, Thotavallur, on account of his festival duty during the recent Krishna Pushkaram under orders of the then President, Taluk Board, Bezwada.

5. This Association resolves to urge upon and request the Government to kindly amend the G. O., No. 1626 P.H., dated 29-6-1929 as follows, in as much as the words "requested to consider invariably the claims of the Medical Practitioners already

in charge of the Rural Dispensaries" are likely to be detrimental to such considerations of their claims by the Boards.

Amendment:—Whenever the Local Boards propose to convert the Allopathic Rural Dispensaries maintained by them into regular ones, they should invariably appoint the existing Rural Medical Practitioners as L. F. Sub Assistant Surgeons in the proposed regular Dispensaries which action automatically cancels on all parties the existing agreements under which the Medical Practitioners are working.

6. This Association resolves to suggest that the Government should pass orders that the Rural Medical Practitioners while submitting their agreements, should do so in triplicate duly signed, the stamped one being kept with the President, District Board, and of the other two, one to be kept with the District Medical Officer and the other to be returned to the Practitioner.

7. This Association resolves to entertain as members all the subsidised Medical Practitioners in the district both L. M. Ps, and L. I. Ms., whether subsidised by the Government or by the Board.

The Tinnevelly District Medical Association, Palamcottah.

The President's function of the Tinnevelly District Medical Association was held at its monthly meeting on Sunday the 25th August 1935, at the Masonic Lodge, Palamcottah. Members numbering 85, including some lady doctors, gathered from all parts of the District. Some of the officials and non-officials graced the function. Lieut. Col. T. S. Shastry, I.M.S., the President, was "At Home" to the members and the non-medical guests. An enjoyable dinner was served to all present at 11-30 A. M. After dinner the guests were entertained to sweet music. M. R. Ry. S. Lakshmana Iyer, Head Clerk, District Medical Officer's Office, Palamcottah, who retired on I6-8-35 was presented with a silver plate and vessels by the District Medical Staff for his devoted service for 28 years.

Lieut. Col. T. S. Shastry, I.M.S., thanked the guests for their kind response to his invitation. He made an appeal to the audience to take keen interest in the welfare of the patients by giving free gifts to the hospital such as gramaphone records, providing funds for the installation of a Radio Station and for equipping the hospital with Pathology, X-Ray, and Radium Institutes so as to make the Head Quarters Hospital an efficient and modern institution. M. R. Ry. Sadhu Ganapathi Pantulu Garu, B.A., B.L.,

a leading advocate of the place responded on behalf of the guests and thanked Col. Shastry, for his invitation and appreciated his keen interest in trying to alleviate the sufferings of humanity and to improve in many ways the efficiency of the Medical Profession in this District.

The business proper of the meeting began at 2-30 P. M. under the Presidentship of Lieut. Col. T. S. Shastry, I.M.S. The minutes of the last meeting were read and passed. Dr. J. T. Moses, L.M.P., showed an interesting case of a swelling in the abdomen. Dr. G. S. Narayana Iyer, L.M.P., of Moolaikaraipatti showed an interesting case of penile fistulae. Interesting case notes on (1) "Hanging" urethra in a female, (2) a tumour on the posterior aspect of the urethral meatus in a woman, (3) thickened Humerus due to syphilis, (4) Massive cancer of the bladder, and (5) polypus in the rectum, were read. There was a lively discussion on these cases. Dr. K. Padmanabha Iyer of Tenkasi read an interesting paper on "Nature Cure"

After the discussion, Lieut. Col. T. S. Shastry, I.M.S., summed up the salient and important features of all the cases.

At 5 P. M. tea was served to the members. Lieut. Col. T. S. Shastry, I.M.S., brought the meeting to a close by offering his cordial thanks to all those who helped him for the success of this function.

The Tinnevelly District Medical Association, Palamcottah

Under the auspices of the Tinnevelly District Medical Association a Health Exhibition was arranged at the Municipal Office, Palamcottah on Saturday, the 24th August 1935.

Lieut. Col. T. S. Shastry, I.M.S., the President, welcomed the guests and requested Mrs. D. D. Warren, the President of the Local Red Cross Society, to open the Exhibition. The Exhibition was thrown open by Mrs. Warren at 9 A. M. who expressed in a short speech that such exhibitions are very useful and beneficial to the masses. Dr. K. Rama Ayyar, M.B., B.S., of Tinnevelly Town gave an interesting lecture on the prevention and causation of Tuberculosis, Leprosy and Cholera. The Exhibition was thrown open to the public till noon. School teachers of the two Municipalities of Palamcottah and Tinnevelly gathered, and lectures were given to them on all the infectious diseases. In the evening the Exhibition was open only to the women, and Dr. R. Jesubatham, L.M.P., gave an interesting lecture in Tamil explaining all the posters.

The exhibits consisted of posters relating to Cholera, Tuberculosis, Malaria, Small-pox, Leprosy, Fly danger, etc. This was very much appreciated by the public. The Exhibition will be open to-morrow also; and lecturing in Tamil will also be done to the teachers and students of Colleges and Schools. A cinema show for the benefit of school children of both the Municipalities has been arranged for Monday the 26th instant between 7 and 8 P. M.

Tha East Godavary District Medical Association, Cocanada

Minutes of the monthly Meeting held at Ramachandrapuram on 24th August 1935.

The monthly meeting of the Association took place this time at Ramachandrapuram on 24-8-35. Captain J. N. Mc. Millan, I.M.S. presided. The Ramachandrapuram group of members were at home to the Association. 38 members from all over the District attended. Dr. T. Kanakaraju of Ramachandrapuram read a paper on "Tonsillectomy". Dr. T. Chelapathy Rao of Ramachandrapuram read a paper on "Infant's Food including Patients". Dr. C. V. Subbarao read a paper on "Approach to the bed side". Dr. V. C. Kamaraju of Cocanada read some Case-Notes on some interesting cases of "Acute Gastro-Enteritis in children". and said that in his experience, the Sodium sulphate toxin elimination treatment combating dehydration and acidoses with Soda-bicarb and Saline by mouth if early and intraperitoneal if late, on a rigid starvation and subsequent and correct dietetic treatment gave most encouraging results in the treatment of Bacillary dysentery in children.

Captain Mc. Millan, while agreeing, emphasised the point that most of the failures in the treatment are due, not only to not following correct lines as above but also diffidence on the part of the doctor in pushing on Chologogue sulphate treatment which must be vigorously pushed on in 20 grain doses for a child of one, every one hour as many times as the child is awake during the 24 hours, until all mucus disappears and the motions are entirely faecol.

After an enjoyable dinner the guests dispersed

The East Godavary District Medical Association Cocanada

Minutes of the Meeting held at Rajahmundry on 21st September 1935.

The monthly meeting of the Association took place this time at Rajahmundry on 21st September 1935. Captain J. S. McMillan I.M.S. presided. The Rajahmundry group of members were at home to the Association. 48 members from all over the District attended. Dr. M. Ranganadham of Ryali exhibited three interesting cases of "Endrocine Deficiency". Dr. Miss T. E. Stephens of Rajahmundry exhibited a case of "Overian Cyst" operated recently in the Government Hospital, Rajahmundry. Three cases of poisoning due to the administration of the Indian drug called "Katukarohini" brought in a condition of collapse, were mentioned by the staff of the Government Hospital, Rajahmundry.

Captain J. S. McMillan I.M.S. delivered an instructive lecture on "Parasitology" in relation to East Godavari District. After an enjoyable dinner followed by Music, the guests dispersed.

The Tinnevelly District Medical Association, Palamcottah

Tuticorin

By the kind invitation of the Tuticorin Medical Union, the Tinnevelly District Medical Association held its monthly meeting at Tuticorn, on Sunday the 29th September 1935. Members numbering 40 including some lady doctors gathered from all parts of the District. Some of the officials & visitors were also present.

After light refreshments and sweet music the meeting began at 6—30 P. M. under the Presidentship of Lieut. Col. T. S. Shastry, I. M. S. The Secretary of Tinnevelly Dt. Medical Association read the minutes of the last meeting which were passed. Then followed a demonstration, by Dr. Janaki, of a clinical case of 'Ovarian Cyst' operated by her in the Govt. Hospital, Tuticorin, this month.

Lieut. Col. T. S. Shastry, I. M. S. delivered an interesting lecture on the "diagnosis of Cancer of Intestines".

Dr. G. Manuel of Tuticorin gave an interesting discourse on "Dietetics" which was followed by discussion by Dr. K. Srinivasaragava Ayyangar, L. M. & S., and by Dr. N. Isaac. The lecturer stressed on the value of Dietetic treatment in preference to Medical in treating cases of diseases due to Dietetic errors.

Thereafter an excellent Dinner brought the happy gathering to a close late at night.

The following resolution moved form the chair was passed unanimously :

> " Resolved to suggest to the Madras Medical College Centenary Celebration Committee (1) that the celebration may be done in the Christmas week to enable all those interested in the Centenary and living in distant parts of the Presidency, to take advantage of the Railway concessions and public holidays and also of the other gatherings that are programmed to take place in the Christmas week in Madras this year and (2) that this happy function need not be held on the exact day on which the college was founded but should be held on a day convenient to most of the medical men and women and the general public interested in this rare function."

Vote of thanks to the Tuticorin Medical Union for their splendid hospitality was proposed by the President, and a standing invitation was given to the Tuticorin Medical Union to attend all the meetings and gatherings of the Tinnevelly District Medical Association as their guests at whichever station the Association may hold its meeting. Dr. Acharya proposed hearty thanks to the lay public tor their kind response.

Thereafter an excellent Dinner brought the happy gathering to a close late at night

BOOK REVIEWS

The Heart visible *By J. Poleiski*, M.D., 1934 pp. 207 Illustrated Price $. 5-0-0 net. F. A. Davis Company Philadephia Pa.

This book deals with Cardiovascular Roentgenology in health and disease. A properly conducted Roentgenology offers the Surgeon or a Physician so much information about any organ, for it helps them to acutally visualize the pathological area and a more certain diagnosis may be formed. But the usual practice of taking a still picture does not give any conclusive or positive sign of the underlying visceral pathology. However the advances in Radiology has progressed to such an extent that it is possible now to visualize any organ from any angle with considerable safety both to the patient and the observer. This volume is mainly intended for the Roentgenologist who has the scientific curiosity as a clinician. The book is highly practical and would interest the Radiologist and Practitioners alike.

Medicine for nurses—*By L. Gordon Seurs* M.D., London M.R.C.P. (London). 1935 pp. 412 Illustrated. London Edward Arnold & Co. Price Sh. 8/6 net.

This book has been prepared specially for the nursing profession and contains all the essential facts of medicine while more common meladies have been treated comperhensively laying stress on the signs and symptoms which the nurse can observe for herself. It covers the Syllabus laid down by the General Nursing Council and many details important from an examination point of view has been included. The book will be found useful by nurse under training and for those engaged in delivering medical lectures to Nurses it is an admirable companion.

Dental Presthetics.—*By Douglas Logan*, L.D.S., R.C.S. (EDIN.) Russel Logan, L.D.S., L.R.C.P.S., etc., 1934, 2nd Edition. E. V. S. Livingstone. Indian agents: Messrs Butterworth & Co., Calcutta.

The object of this book is to give in a concise form the essentials of Dental mechanics. This is the second edition and has been prepared in collaboration with Mr. R. W. Russel Logan. The text has been revised and all the latest developments have been included to make it up-to-date. Among the addition in this book may be mentioned the chapter on Stainless Steel. The book contains as many as 48 illustrations, is handy and well got up. We recommend the book to all our readers interested in the mechanical dentistry.

Annual Report of the Calcutta School of Tropical Medicine and the Carmichael Hospital for Tropical Diseases 1934—

This is a record of excellent work done by the Calcutta School of Tropical Medicine during the year 1934 under the supervision of Lt. Col. Knowles, I.M.S., who was officiating Director in place of Lt. Col. Acton, C.I.E.,. IM.S., on leave. The spirit with which Lt. Col. Knowles and the enthusiastic band of workers under him, worked, is expressed in this short and sweet sentence :—" The motto of the workers at the School has always been to work unselfishly for the Institution and not for themselves and it is this spirit of co-operation which is responsible for the smooth working and large output of research work to which the Institution owes its present position in the medieal world". Certainly, no greater tribute can be paid to the selfless sacrifice

which the staff of the Calcutta School of Tropical medicine is making to relieve suffering humanity from the pangs of disease and recover them from the jaws of death.

The Indian Research Fund Association and the Rockefeller Foundation have helped the Institution financially, the former subsidizing eleven research enquiries at the School during 1934-35 and finding the salaries of two professors and the latter, extending one Fellowship awarded in 1930 for a second year and awarding two new Fellowships for the year to enable assistant professors and research workers "to visit Europe or America to be taught by men there working on kindred lines, to exchange views and ideas, and to return to their appointments with a much wider horizon and to maintain touch with workers in other countries".

During the year, 36 students appeared for the D. T. M. Examination of the Faculty of Tropical medicine of whom 32 passed. 28 students appeared for D. P. H. Examination in Part I, of whom 24 passed, 23 appeared in Part II, of whom 16 passed. For the L. T. M. examination, 45 students appeared; of these, 27 passed. This is indeed a creditable record.

The speical investigation conducted during the year, were in respect of Cerebro Spinal Meningitis and epidemic Dropsy. Research work on Cholera, was continued and enquiry into hill diarrhœas and dysenteries in Darjiling was started. The Malaria Transmission Enqury was also continued throughout the year. The Indigenous Drugs Enquiry and the Drug Addiction Enquiry were continued. In short, there was no department of medical Scince which was overlooked and no enquiry in which advancement was not made. Detailed reports on each section are given separately by the head of the department. We congratulate Lt. Col. Knowles I.M.S. & Lt Col. Chopra, C.I.E., I.M.S., Officiating Director and the author of the report on the successful working of the School and the Staff, for their unstinted service.

CORRIGENDUM

'The Antiseptic', September '35 issue—page 609, *for* the title 'Radio Therapy in Glandular Diseases', *read*, "Radio Therapy in Glandular Tuberculosis'.

INDEX TO ADVERTISERS.

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