

THE ANTISEPTIC

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The Antiseptic

A Monthly Medical Journal

Edited by

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



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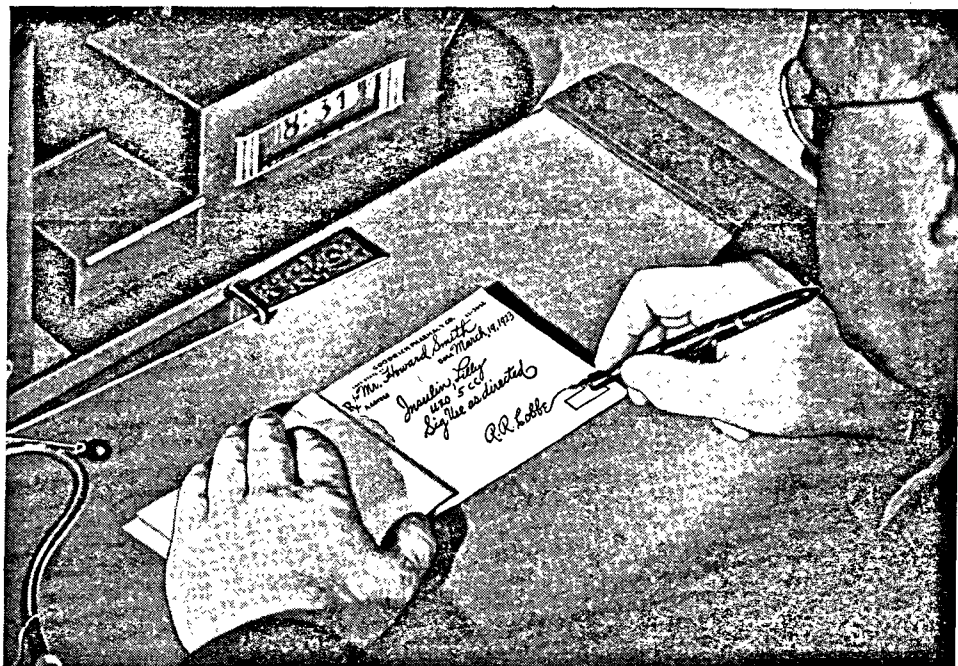
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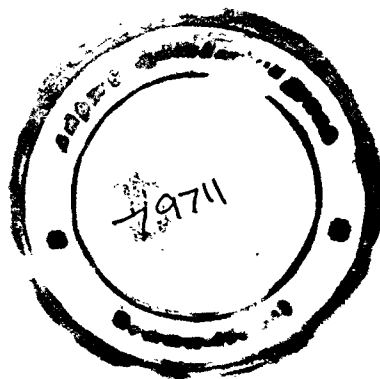
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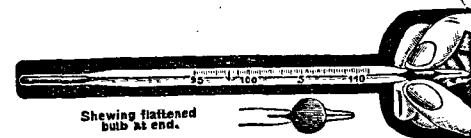
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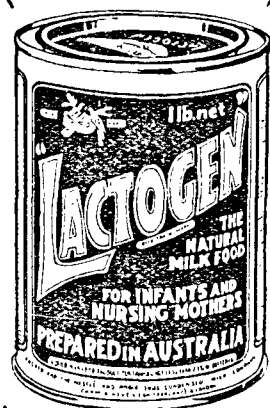
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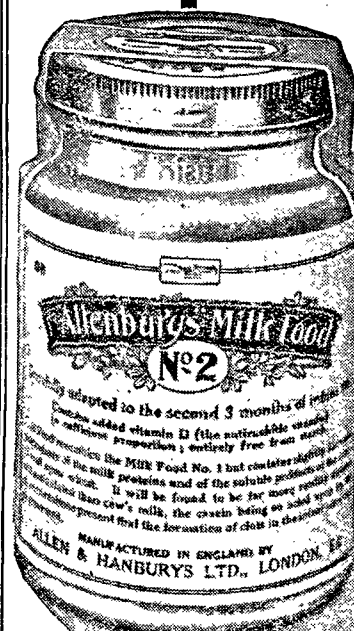
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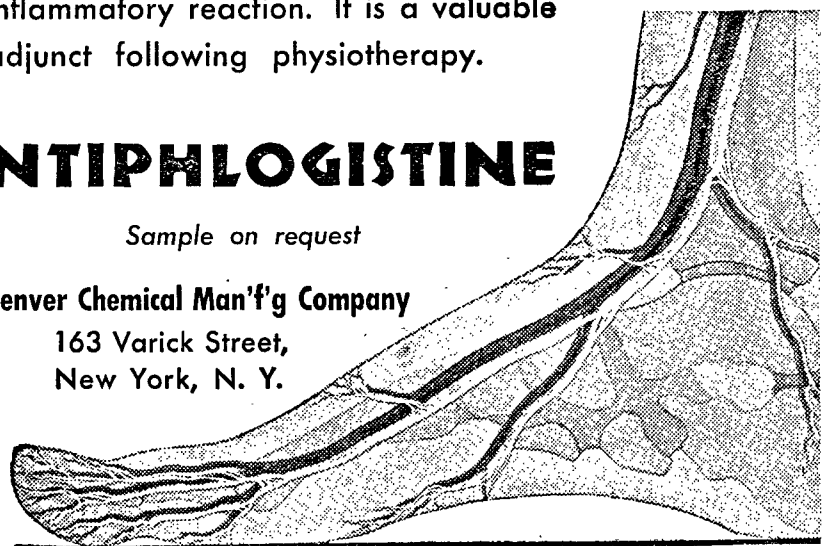
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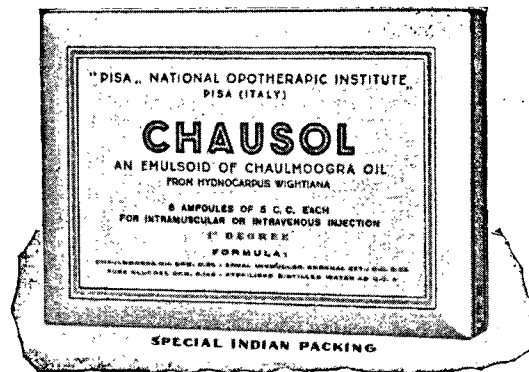
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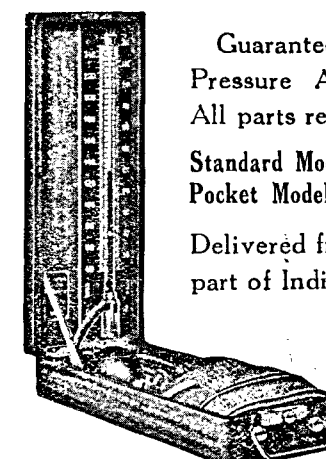
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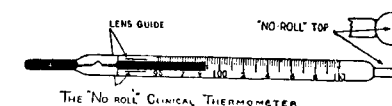


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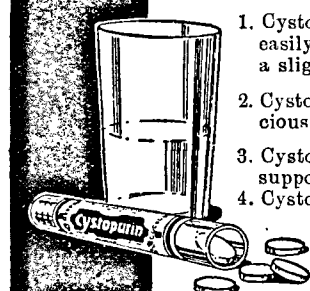
Kalzana regulates the disturbed calcium metabolism, thus preventing eclampsia, oedema, dermatosis, osteomalacia, tetany, dental caries, etc.

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It is, therefore, especially suitable in children's practice.

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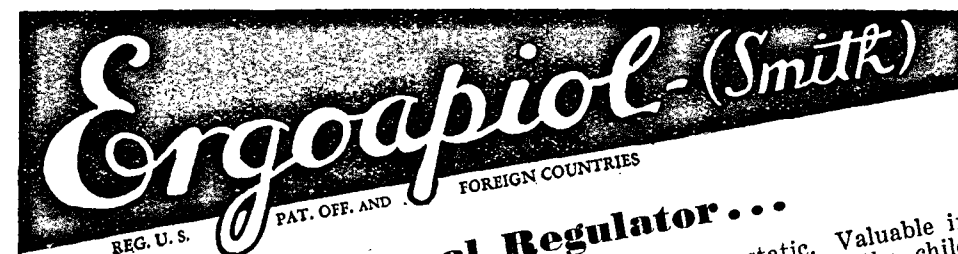
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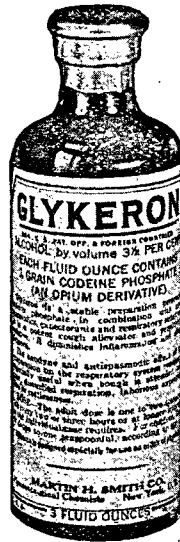
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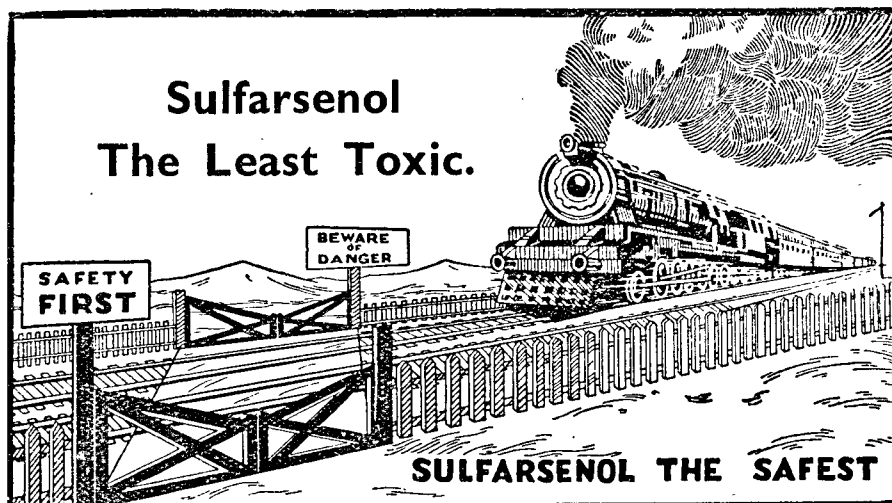
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VITAMINS in INFANT FEEDING

NATURAL OR ARTIFICIAL

"It may come as a blow to learn that artificial vitamin D is not nearly so active in preventing or curing rickets as is the natural vitamin D which is present in milk, butter and cod-liver oil."

(Address given by Dr. J. C. Drummond at St. Mary's Hospital, London, 17th May, 1934.)

"The Conference recognises that amounts of cod-liver oil and irradiated ergosterol which contain an equal number of vitamin D units, as determined by tests with rats, may not possess equal anti-rachitic activity when tested on certain other species—e.g. poultry."

(League of Nations, Quarterly Bulletin of the Health Organisation, September, 1934.)

Scientific evidence is now rapidly accumulating to indicate that in the prophylaxis of rickets and other bone diseases, the natural vitamin content present in butter and cod-liver oil is more reliable and effective than that artificially produced by irradiation.

Even Steenbock, the American pioneer of irradiation, has admitted (Jnl. Biol. Chem., July, 1932) that:—

"Ergosterol and yeast when activated anti-rachitically by ultra-violet radiations are inefficient sources of vitamin D for the chicken. Whereas 1 per cent of cod-liver oil of average potency resulted in normal bone formation, it required from 40 to 120 per cent of cod-liver oil equivalence as irradiated ergosterol and from 7.5 to 60 per cent cod-liver oil equivalence as yeast to produce the same result.

"Irradiated ergosterol in excessive doses was found to be toxic for chickens.

"The vitamin D produced by ordinary irradiation of ergosterol with a quartz mercury vapor lamp is a different substance from that found in cod-liver oil. This is concluded from the fact that irradiated ergosterol, whether fed in corn oil or in cod-liver oil solution, shows the same degree or anti-rachitic efficiency and the same toxicity."

Cow & Gate Milk Foods are free from artificial vitamins.



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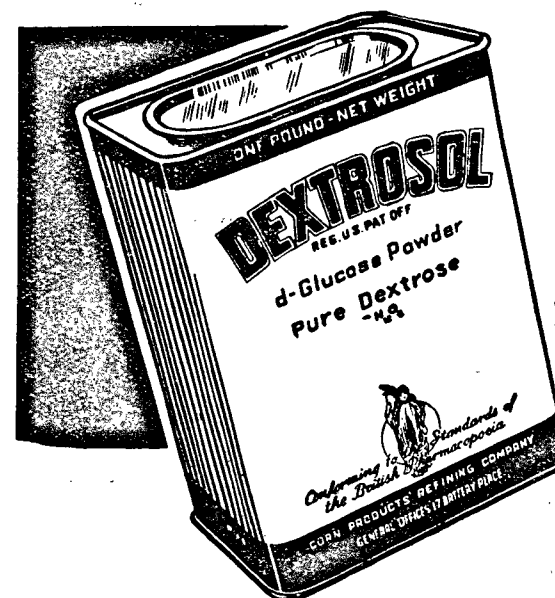
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"If there be less phosphorus in the body the nervous system will not be able to perform its functions properly; children become lazy or crazy, young men impotent or indolent, young women hysteric or sterile and old persons imbecile or irritable." PHOSPH-AURA proves to be most efficacious in all such conditions.

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Cannula Stopped
(German Patient)

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DUSSELNORF, Grafenberger Allee 140.
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You can make enquiry if you like of this Communication.

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Phillips' Milk of Magnesia may be prescribed for infants and children with absolute safety. Its action is smooth and gentle, not harsh nor violent. It sweetens the stomach, promotes digestion, counteracts stomach acidity. It tones up the entire intestinal tract and insures gentle, natural elimination.

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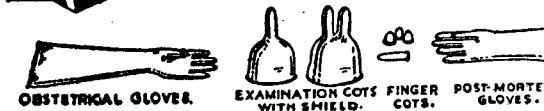
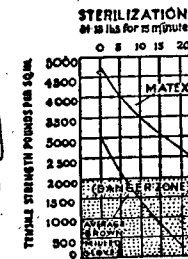


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MATEX glove is flesh coloured. Its texture resembles the natural skin and though it is thinner, it is tougher and much more durable than any brown-milled rubber glove. Try a pair and it will fully satisfy you. Price **Rs. 1-4 a pair** and **Rs. 13-8 per dozen pairs**.

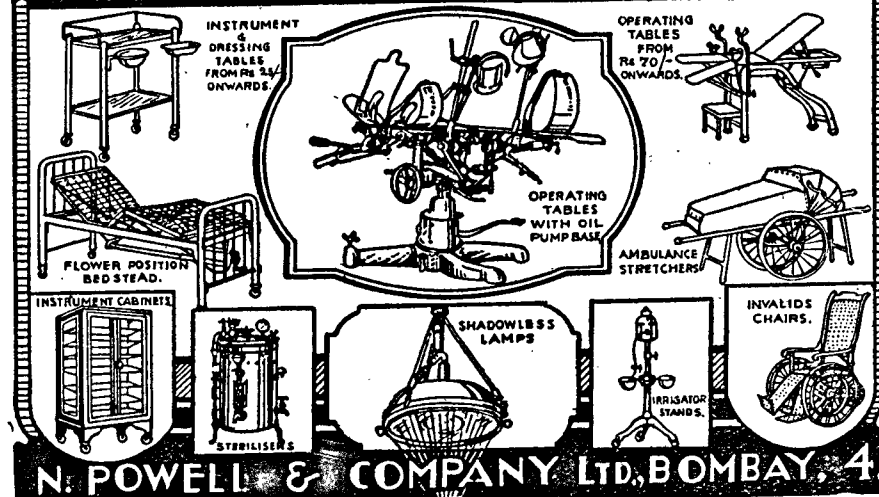
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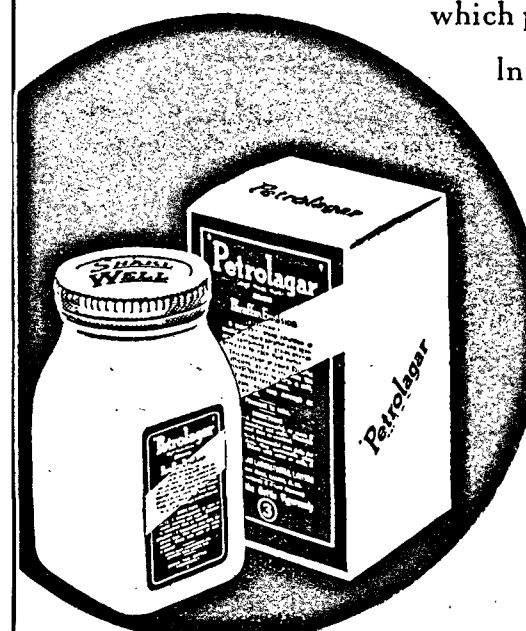
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This variety of 'Petrolagar' is made mildly alkaline by the addition of magnesium hydrate.

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These Diostate lozenges are a pleasantly flavored candy suitable for increasing the calcium and phosphorus intake of children. Useful also in pregnancy or wherever calcium deficiency occurs. Three wafers provide the calcium and phosphorus of 1 quart of milk, and in the same ratio as found in milk.



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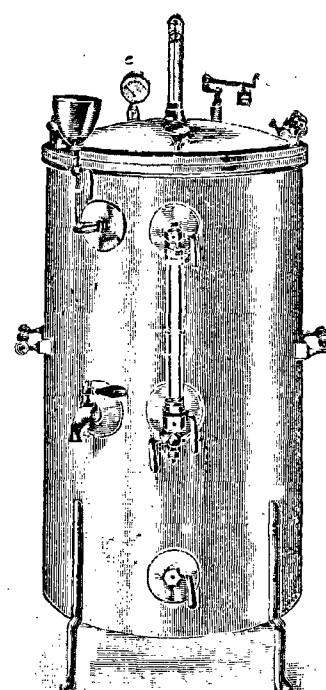
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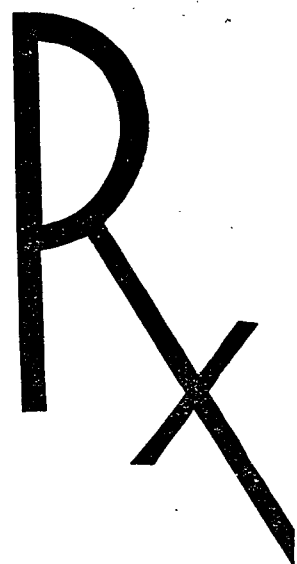
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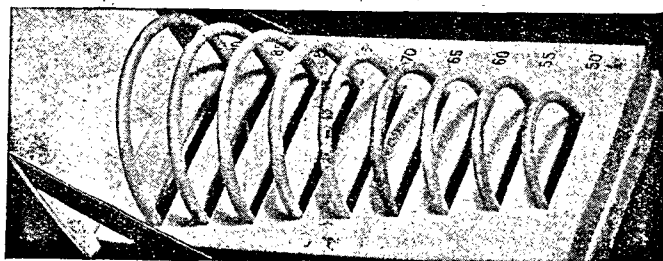


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ORIGINAL ARTICLES

ANTERIOR SHOULDER AND ITS HELP IN DIAGNOSIS

BY

DR. N. A. PURANDARE, M.D., F.C.P.S.

Sandhurst Road, Bombay.

DIAGNOSIS means determination of a morbid condition with the help of various signs and symptoms that it gives rise to. In obstetric practice the use of the word is rather extended and applied even to recognising the normal physiological phenomena as pregnancy and presentation and position of the child. The latter conditions can be easily determined in the later months of pregnancy when the different parts of the foetus are distinctly palpable. To feel them, abdominal examination is inevitable. It must be done systematically so that all information necessary for correct diagnosis may be obtained. Information thus gained by it does away with the necessity of doing, during labour, vaginal examination, which is fraught with the grave danger of introducing sepsis. This proves without doubt the significance of the abdominal examination, the skill of which should be cultivated by improving every opportunity of palpating different parts of the foetus. This must be done most carefully so that they can be precisely distinguished and presentation, position, and relation of the head to the pelvis determined. Of the various parts of the foetus, the recognition of the Anterior Shoulder is of great practical utility, as it helps along with other signs to ascertain the relations of the child.

* Specially contributed to 'The Antiseptic'.

Anterior Shoulder as being in contact with the anterior wall of the uterus can be easily made out when examination is made in a systematic way. It helps to decide the position in the vertex presentation, to appreciate the engagement of the head in the pelvis, to judge of the progress of labour and to determine the line of treatment to be adopted.

The palpation for the anterior shoulder should be reserved until the head has been palpated for obtaining all the information about it and the direction of the groove between the head and the trunk has been determined. To carry out these manipulations, the examiner has to stand on the right side of the patient looking towards her feet. The groove in the situation of the neck must be first discovered as it facilitates the detection of the anterior shoulder. It can be done by finding out with both the hands the highest limits of the head on either side. On leaving these points the fingers at once dip into the groove. Carrying the fingers yet higher, on one side, they come at once upon the prominent conical part, the anterior shoulder. It has to be differentiated from the hand which is sometimes felt when it is being held in front of the face, the points of difference being the hand is flat, broad and is readily displaceable. The anterior shoulder is firm and can be traced upwards on to the back. It will be found situated on the side where the back is, being on the left side in the first and fourth position and on the right side in the second and the third. Now to distinguish between the anterior and posterior positions, the central line and the pararectal line on either side are taken as land-marks; the region between the central line and the left pararectal line is taken as the left median and that outside it as the left lateral region; there can be taken corresponding regions on the right side. In the first position, the anterior shoulder is in the left median region, in the fourth position, in the left lateral; in the second position, in the right median while in the third, in the right lateral region. Thus the anterior shoulder tends to be a reliable guide to determine the positions and in this respect it is even superior to the back. It is said that when the back is felt anteriorly, it is one of the anterior positions and when posteriorly one of the posterior positions. As has been established by clinical experience that the anterior shoulder is, even in the anterior positions, always on the side where the back is directed; the back is in consequence never felt exactly forward. Besides in the posterior positions it is hard to feel it in the flank, whereas both in the anterior and posterior positions anterior shoulder can be readily discovered and by its position the

anterior position is almost invariably differentiated from the posterior. The anterior and the posterior positions thus ascertained by detecting the exact situation of the anterior shoulder can be verified by listening to the foetal heart sounds which would be more distinctly heard on the line joining the umbilicus and the anterior superior iliac spine in the anterior position while in the posterior one they are heard less loudly and more in the flank. A skiagram may be useful in locating the anterior shoulder. In a clear photograph we may get the shadows of both the upper extremities; on tracing the humerus we may reach the spot of the shoulder joints. The humerus itself can be known by tracing the shadows of the pair of bones representing the radius and the ulna starting at its low end and tending towards the head of the foetus. The anterior shoulder is invariably lower than the posterior. To obtain the shadow of the anterior shoulder most distinctly, while taking the photo, the patient should be placed on her abdomen and not in her back as usual, thereby having the anterior shoulder close to the film. Otherwise, usually the posterior shoulder has its shadow more marked than the anterior.

The other use of locating the anterior shoulder consists in knowing the engagements of the head. The head may have engaged the pelvis or not; in conformity with this, the height of the anterior shoulder as measured from the top of the symphysis-pubis will vary. The distances that I have determined on examining several thousands of cases as indicating the degrees of the engagement of the head are as follows:—

When the head is not engaged and is floating ...	4½" to 5"
When the head is in the brim ...	4"
When the head is half engaged ...	3"
When the head is fully engaged ...	2"
When the head is on the pelvic floor ...	1½"

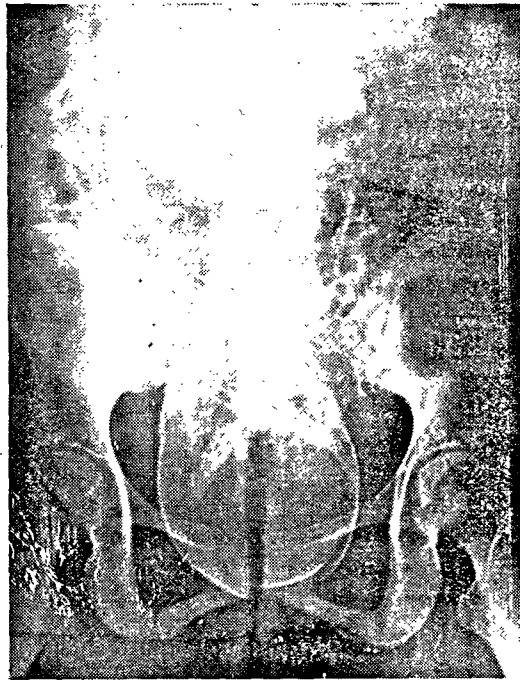
These distances have been settled by measuring the height on the abdomen and by noticing how far the head is descended in the pelvis by rectal examination. It is obvious that it is possible to appreciate the exact relation of the head to the pelvis from abdominal examination alone by these heights. Again the amount of the head to be felt above the brim corresponds to the anterior shoulder. It is about quarter of the head when it is 2", half when 3", three-fourths when 4", and whole when over 4".

Besides, being serviceable in determining the position and the amount of engagement, the anterior shoulder is helpful in labour to know its progress by two ways: first, by indicating how

far the head has descended by its height and secondly, whether the internal rotation has begun by its situation from the middle line. The height of the anterior shoulder and the distance from the line can be represented by a vertical and a transverse line, distance the vertical line representing the height while the transverse, the distance from the central line. By taking the measurements every hour and by noting them down in this way we can at once know whether the labour is progressing. These measurements are of material use in trial labours, when they can be taken more frequently. They can give the necessary information and do away with the necessity of making internal examinations. Should the anterior shoulder remain persistently four inches and above during labour in spite of strong pains, it is a great indication of and it calls for urgent artificial aid in the interests of the mother and child. In the case of Occipito-posterior position if the anterior shoulder continues to remain almost at the same spot for three hours even after the bursting of the bag, it calls for help of the nature of manual rotation.

The other practical use of the anterior shoulder is in applying the midwifery forceps. Many a time it is difficult to locate exactly how far the head has sunk into the pelvis because of the wrong information given by the caput-succedaneum. In obstructed delivery, when the forceps is most needed the head might have undergone great moulding and marked caput might have been formed, whereby the head might appear to have much descended or even to present at the vulval orifice, though in reality at that time the greater circumference of the head might be above the pelvic brim. Under the circumstances the anterior shoulder furnishes the reliable information.

When the anterior shoulder is at the height of $1\frac{1}{2}$ " the forceps application is easy and also safe if carefully carried out. The extraction of the child by forceps is fairly easy up to 2" in as much as the greatest circumference of the head has passed the brim and is in the cavity. When the height is between 3" and 2", the extraction is moderately difficult, as the head is above the pelvic floor and is lying in the oblique diameter. If it is between 4" and 3", the extraction by forceps is very difficult since the greatest circumference of the head is above the brim. Both the mother and child are prone to injury and the forceps should be tentatively tried. An axis-traction forceps would prove to be more useful. When the height of the anterior shoulder is above 4", the forceps is contra-indicated.



"When the occiput was seen emerging under the pubic arch in a primipara it was found that the sagittal suture was exactly in the antero posterior diameter of the outlet, the anterior shoulder, which was at the outset of labour in the left median region, being a first position has gone completely to the right side of the pelvis, the back of the child is to the front with its spines almost corresponding to the middle line."

—Dr. N. A. Purandare.

With regard to the posterior position, if the anterior shoulder is 3" or more from the middle line and the head is in the cavity and not making progress, the situation of the anterior shoulder remaining persistently the same indicates that the occiput is still behind, and unless the manual rotation is performed forceps cannot be applied.

Moreover the anterior shoulder, is a reliable indicator of the occiput undergoing internal rotation and approaching the pubic arch when it is found that the shoulder has reached the middle line or has even crossed that line. Such turning inward of the anterior shoulder is observed both in the anterior and posterior positions and is in conformity with the internal rotation of the head. In one Radiogram taken at the time when the occiput was seen emerging under the pubic arch in a primipara it was found that the sagittal suture was exactly in the antero-posterior diameter of the outlet, the anterior shoulder, which was at the outset of labour in the left median region, being a first position has gone completely to the right side of the pelvis, the back of the child is to the front with its spines almost corresponding to the middle line. Such an event tends to prove that when the head is escaping in the antero-posterior diameter of the outlet, the shoulder might have undergone rotation and lying in normal relation to the head. Under this condition the head after it is born does not undergo restitution since there is no twisting of the neck. In this case sometimes the posterior shoulder pursues the forward rotation and emerges under the pubic arch, the child appearing to be born in a position opposite to that in which it was found before labour, thus raising suspicion in the mind about the first diagnosis.

The position of the anterior shoulder is of practical use in determining the line of treatment. If the anterior shoulder is at the height of 2", it shows that the normal relation between the head and the pelvis exists and the labour will run a normal course, and the case will end spontaneously provided the natural forces are normal. With the height of 3", normal delivery can be anticipated only the head has to commence its descent from the mid-cavity. If the height is 4", the head has to pass down the bony canal and then the soft parturient canal; and it does so if the driving force is sustained all along. Failing this, when the pains begin to be weak, the delivery is to be effected by artificial aid. In the case in which the height is upwards of 4", the delivery may or may not occur according as the overlapping of the symphysis pubis by the head is slight or much. When slight

the lower segment first brings about reduction of the head in size by moulding so as to adopt to the pelvic brim and then after the head has sunk into the pelvis the uterus has to exercise more energy in driving the child out. The uterus may succeed or may get fatigued in the act. Such exhaustion may be exhibited during the second stage or sometimes in the third stage. When bulging of the head beyond the anterior surface of the symphysis pubis is marked, the head cannot be reduced so much in size as to make it engage the brim and the only resource is Caesarean section.

The locating of the anterior shoulder is necessary in persistent occipito-posterior position and in the face presentation. In the former, if the bag has ruptured, and more than a couple of hours have elapsed, yet the occiput has remained behind and the head is making no progress realised by noting the anterior shoulder to occupy the same spot, even though so much time has passed, artificial aid is to be given lest all the liquor amnii should drain away, the uterine come closer in contact with the child and prevent its vertical manual rotation within the cavity afterwards. To carry out the manual rotation the hand corresponding to the abdomen of the child is introduced in the vagina and after the head has been flexed, fingers are placed on the forehead to rotate it backwards towards the sacral hollow: while the other hand is placed on the abdomen behind the anterior shoulder to push it over to the opposite side so as to rotate the trunk. In the same way the child is rotated manually in a persistent manto-posterior position by one hand in the vagina catching the face across the temples and the other hand on the abdomen behind the anterior shoulder pushing it across the middle line. In the face, if the presentation is diagnosed at the early stage of labour before the head has sunk into the pelvis, the face can be changed into vertex, by first lifting the trunk up with one hand below the anterior shoulder; whereas the other hand pushes the occiput downwards and towards the face to effect flexion of the head.

In fine, it is of great significance to learn to locate the anterior shoulder which tends to be a practical guide in recognising the different conditions and in adopting a convenient treatment.

A FEW FACTS REGARDING CEREBRO-SPINAL FEVER*

as seen amongst the patients of the Campbell Hospital, Calcutta.

BY

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(Continued from p. 211, Vol. 33, No. 4, April issue of the 'Antiseptic')

Treatment of C. S. Fever :—

- (1) Patient is kept as quiet in the ward as possible; any unnecessary meddling and fussing or forcible restraint of the patient is always discouraged.
- (2) If patient is boisterous he must be quietened anyhow. Sedatives like Chloral Hydrate and Pot. Bromide or injections of Hyocine hydrobromide or Morphia are freely given.
- (3) Bladder relieved by catheter if necessary and bowels opened by soap water enema.
- (4) Ice cap on the shaved head till the temperature comes down to 101.5° F.
Tepid sponging if necessary, cold sponging is always avoided.
- (5) Backs are rubbed twice daily with Spirit and Powder. Eyes are washed and cleaned twice daily by Boric lotion. and Liquid Paraffin is dropped to prevent dryness of the cornea.
Gargling with dilute E. C. and application of Boro-glycerine to the mouth and lips.
- (6) Water is regularly given to each patient at frequent intervals, total quantity of fluid given is sometimes measured. Barley water with sugar and fruit juice given at regular intervals.
- (7) Oxygen inhalations if dyspnoea and cyanosis are present.
- (8) Pneumonia and Broncho-pneumonia are treated accordingly.
- (9) To control the nervous symptoms, Chloral hydrate grs. 15 with Pot. bromide grs 15 is given per mouth twice or thrice daily. Chloroform inhalation is sometimes given where sedatives fail.

* Specially contributed to 'The Antiseptic'.

- (10) The nasal and oral discharges are infectious, the hygiene of these cavities is thoroughly attended to and all soiled objects properly disinfected.
- (11) The attendants clean their hands with soap and water, then immerse them in Hydr. Biniodide lotion 1 in 1000. Simple bland oily sprays may aid in prophylaxis; Mistol is very good but irritating substances are to be avoided.

Drug treatment:—Mist. alkaline with Digitalis 1 oz. t, d, s; Mist. Hydr. biniodide 1 oz. t, d, s; Mist. Pot. iodide 1 oz. t, d, s; (in later stages); Urotropin grs. 10 in half a cupful of water B. D.; Cardiozol tablets; S. S. Mag. sulph 1 oz. and repeated as often as necessary; Expectorants in lung conditions; Sedatives to relieve nervous symptoms; Glucose et soda drinks; Subcutaneous saline in pulseless cases.

Intramuscular injections:—Atropine gr. 1/100 or 1/50; Camphor in ether 2 c.c.; Glucose 12½%—10 c.c.; Strychnine 1/60 gr.

Intravenous medication:—Mercurochrome. 5%—10 c.c. daily for the first 4 or 5 days; Urotropin 40% 2.5 c.c. with 10 c.c. of Glucose 25% daily; Acriflavine ½%—10 c.c. daily; Iodine 1%—2 c.c. on alternate days; Calcii chloride 10%—2.5 c.c. daily; Glucose 25%—10—15 c.c. as often as necessary. Of all these drugs, Mercurochrome and Iodine were found to be efficacious; Urotropin was not so good, it seemed to produce more headache.

Auto-haemotherapy:—A fair number of cases were treated with no better result, with 5—10 c.c. of patient's own blood. It was injected intramuscularly every alternate day for 5 or 4 days in addition to the ordinary treatment and was found to be useless.

A few cases were treated by intramuscular injections of 5 c.c. of their own cerebrospinal fluid in addition to the ordinary treatment and it was found to be no good.

Saturated Solution of Mag. Sulph per rectum was tried twice daily in almost all cases with a view to reduce intracranial tension but this measure did not seem to yield any appreciable good result.

Lumbar-puncture.—Lumbar-puncture was done in all cases and repeated as often as necessary according to the condition of the patient.

It was sometimes repeated twice daily, otherwise the puncture was done once a day and on subsequent days till the C. S. fluid was clear. The average number of lumbar-punctures in cured cases was 8-10 per patient. The main indications of lumbar-puncture were, unconsciousness, delirium, severe headache, widely dilated pupils, and collapsing pulse with marked rigidity of the neck.

TABLE A.
Cerebrospinal Fever. Seasonal Incidence and Deaths.

Month.	Total Number of Admissions.	Total Number of Deaths.	Percentage of Mortality.
January 1934	54	34	62.96
February "	92	48	52.17
March "	81	46	56.79
April "	63	35	55.55
May "	65	46	70.76
June "	40	26	65.00
July "	44	31	70.45
August "	58	51	87.93
September "	75	52	69.33
October "	42	24	57.14
November "	62	41	66.12
December "	96	68	70.83
Total ...	772	502	65.02

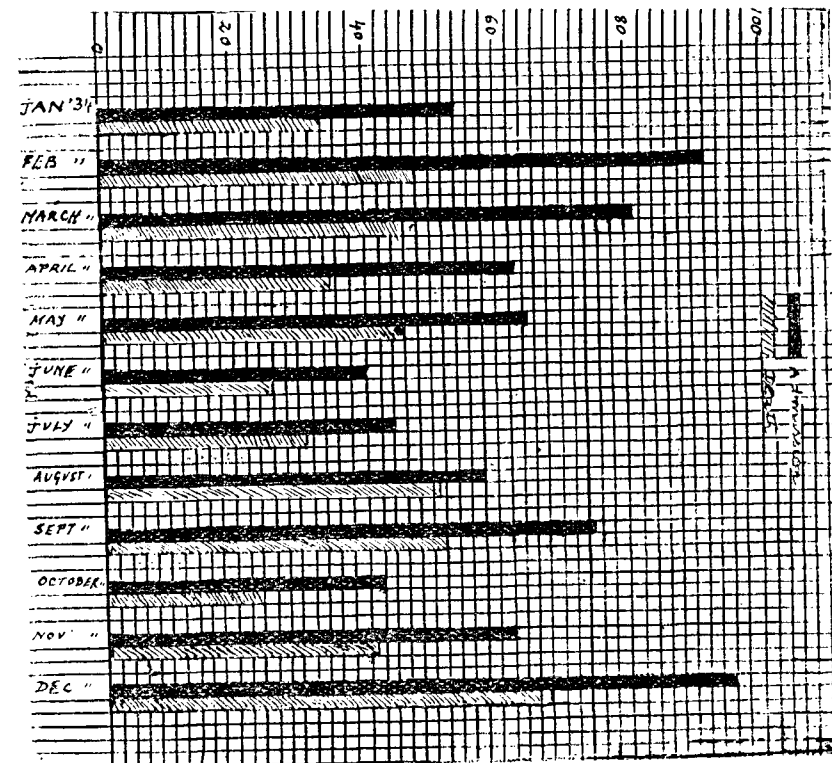


TABLE B.
Cerebrospinal Fever. Caste and Sex Incidence (By months)

Month.	Hindu		Mohamedan.		Other Caste.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	
January 1934	44	1	8	0	1	0	54
February "	70	5	17	0	0	0	92
March "	48	16	15	1	1	0	81
April "	35	9	15	3	1	0	63
May "	47	6	12	0	0	0	65
June "	27	3	7	1	1	1	40
July "	30	6	8	0	0	0	44
August "	45	5	7	0	1	0	58
September "	52	9	13	1	0	0	75
October "	30	6	6	0	0	0	42
November "	42	11	9	0	0	0	62
December "	65	10	19	1	1	0	96
Total ...	535	87	136	7	6	1	772

Graph II Mortality in C.S. fever (By months)

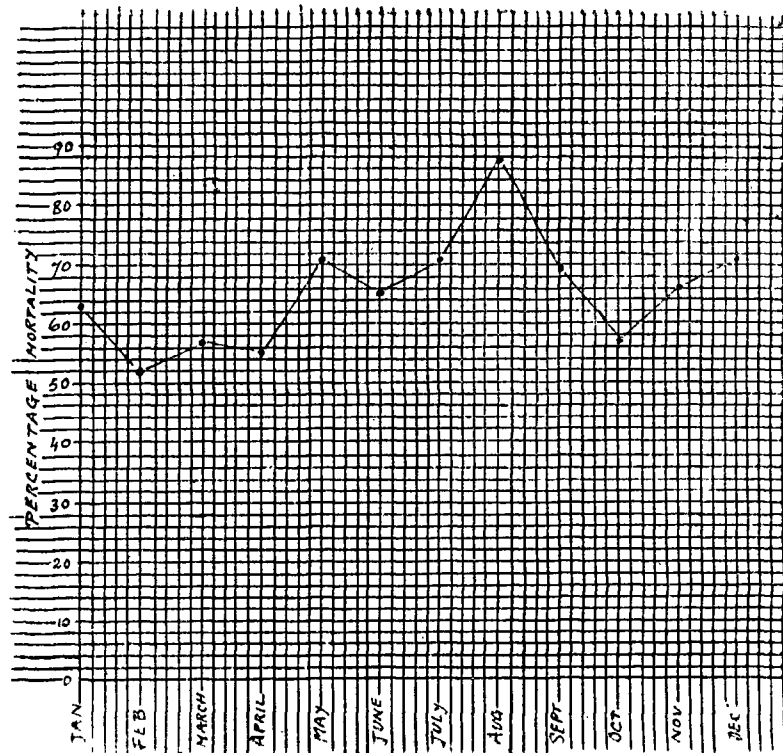


TABLE C.
Mortality in Cerebrospinal Fever, month by month.

Month.	Number of Cases.	Patients recovered.	Patients Died.	Result unknown.	Percentage of Mortality.
January 1934	54	16	34	4	62.96
February "	92	35	48	9	52.17
March "	81	27	46	8	56.79
April "	63	21	35	7	55.55
May "	65	16	46	3	70.76
June "	40	9	26	5	65.00
July "	44	8	31	5	70.45
August "	58	6	51	1	87.93
September "	75	16	52	7	69.33
October "	42	15	24	3	57.14
November "	62	19	41	2	66.12
December "	96	27	68	1	70.83
Total ...	772	215	502	55	65.02

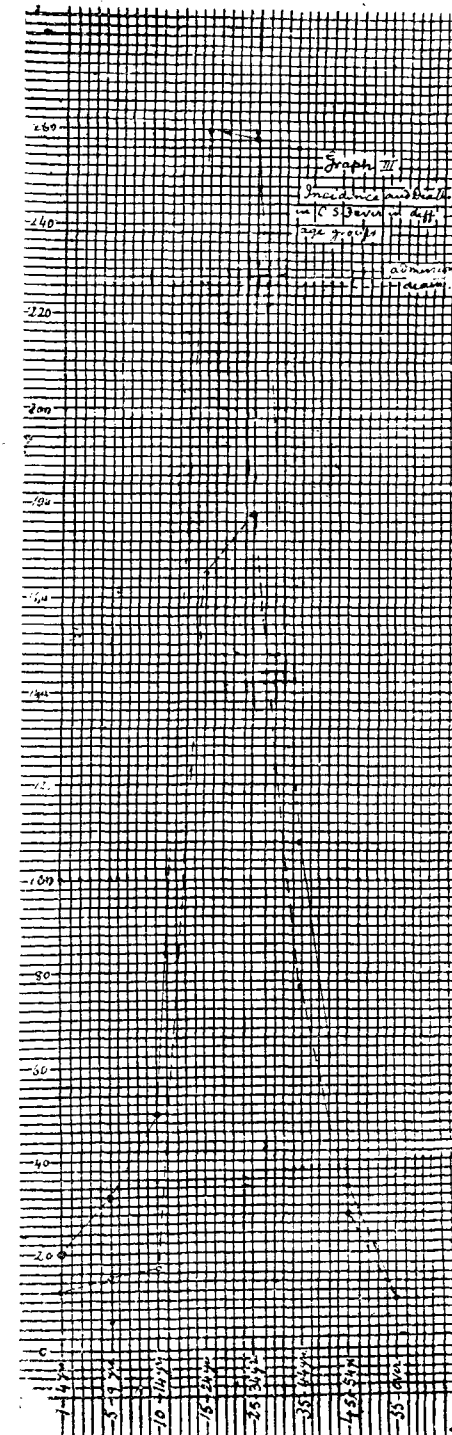
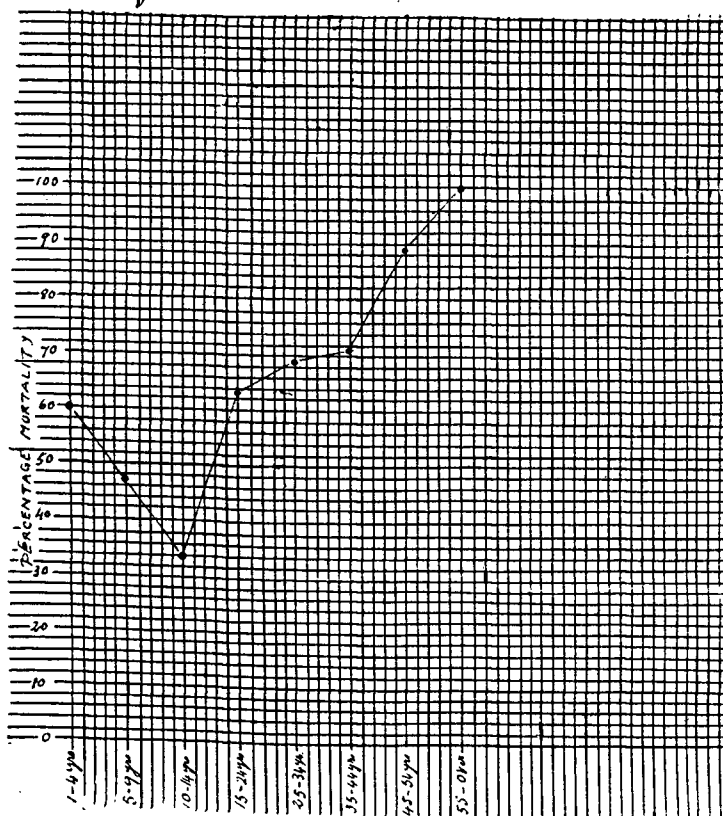


TABLE D.

Incidence of Cerebrospinal Fever in different age groups with mortality.

Age Group.	Total Admission.		Total Deaths.		Cured.	Result un-known.	Percentage of Mortality.
	Number.	Percentage.	Number.	Percentage.			
1—4 years.	20	2.591	12	2.390	3	5	60.00
5—9 „	32	4.144	15	2.988	13	4	46.88
10—14 „	50	6.476	17	3.386	26	7	34.00
15—24 „	260	33.679	165	32.869	80	15	63.47
25—34 „	258	33.419	178	35.458	64	16	68.99
35—44 „	108	13.989	77	15.338	25	6	71.39
45—54 „	34	4.404	28	5.577	4	2	88.89
55 years & over.	10	1.296	10	1.992	0	0	100.00
Total ...	772		502		215	55	

Graph IV
Mortality in C. S. fever in different ages



The objects of lumbar-puncture evidently are :—

- (1) to relieve the intracranial pressure and its associated signs and symptoms.
- (2) to procure material (C. S. fluid) for cultural and microscopical examinations.
- (3) To eliminate from the system as much quantity of toxic material as possible.
- (4) To administer anti-meningococcal serum and other drugs by the intrathecal route.

Cisterna Puncture :—Now it is our routine practice to do Cisterna puncture in almost all cases in addition to the usual lumbar-punctures. The strong indications for doing a Cisterna-puncture are, extremely low condition with boisterousness, pulseless condition and paretic condition of the limbs. The effect of doing C. P. in such cases is immediate improvement in the general condition of the patient, at least to some extent. Before doing C. P., subcutaneous saline, atropine or camphor in ether is given. We have done so many cisterna punctures and not a single case has met with fatality immediately after C. P. We usually do C. P. thrice on alternate days according to the gravity of the case.

Ventricular punctures have been done in two infants and one was cured.

Serum treatment :—Polyvalent antimeningococcal serum prepared by Messrs Bengal Immunity Co. Ltd. was used in our cases. About 50 c.c. was injected intravenously daily for the first 3 or 4 days, in addition to about 10-20 c.c. intrathecally daily. Thereafter serum, was continued only by the intrathecal route for about a week till the C. S. fluid was getting almost clear.

The net result by serum treatment is not apparently very convincing, as the mortality is running almost the same inspite of this intensive treatment by the polyvalent antimeningococcal serum. When quick typing of the different strain of meningococcus would be possible, and if the appropriate specific mono-valent serum is available, and used in the cases, the results might be more encouraging.

The average amount of polyvalent serum used per patient was about 100-150 c.c.

Complications of serum treatment were not commonly seen in our cases. Urticarial rashes and painful joints were seen in a few cases only. As a prophylaxis against serum trouble, Calcium chloride, 10%, 2-5 c.c. was given intravenously in all cases and also, Calcium lactate per mouth. The relapse cases were first

desensitised against serum and subsequently serum was administered as in usual cases. Meningococcal vaccine, so kindly supplied by the Calcutta School of Tropical Medicine was tried in the chronic cases with prolonged pyrexia and progressive asthenia. The doses were gradually increased and repeated every fourth day. The result seemed to be encouraging.

Meningococcal Vaccine, as a prophylactic inoculation was tried in a very few cases. The local and constitutional reactions were very severe and no more volunteers could be procured.

ANAEMIAS (CHIEFLY NUTRITIONAL) AND ASSOCIATED MENTAL ABNORMALITIES—A CLINICAL STUDY*

BY

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Introductory

THE present paper is the first of a series of Clinical investigations proposed to be conducted in the Mysore Government Mental Hospital, Bangalore, on the inter-relationship between deficient nutrition and mental abnormality. It deals with mental abnormalities found in association with anæmias, and is only a preliminary investigation. It is proposed to follow this up with confirmatory studies, on the same subject, as well as studies on the association of mental abnormalities with pigmentation, oedema, polyneuritis, all traceable to avitaminosis and other deficiencies in nutrition.

My interest in this problem was aroused in a very casual manner. I found that a large percentage of hospital admissions 85 to 90%, were not only undersized and poorly nourished, but in a considerable number there was profound anæmia as well. The present paper is based on a clinical study of about 82 patients suffering from anaemia of various types and degree, who were found amongst 300 admissions to the Mysore Government Mental Hospital, Bangalore, during last year. These patients were admitted not for anæmia, but for mental disorder. The anæmia was found only during routine physical examination.

Historical

Every practitioner is familiar with the fact that emotional instability is very common in anæmic patients: they are depressed,

* Specially contributed to 'The Antiseptic'.

irritable, easily fatigued, easily excited and with unaccountable swings of mood. Occasionally, the excitement, and less frequently the depression, is of such a severe nature as to need certification and hospitalization in a mental hospital. Except in the case of the syndrome, Pernicious anæmia, very few studies seem to have been made on the inter-relationship between anæmic states and mental disorder, and even these studies are confined to western writers under western conditions.

Barret, Philips, Atkin, Hackfield and Piney amongst others have contributed papers on the mental changes associated with pernicious anæmia. The general feeling seems to be that pernicious anæmia is favourable to the development of a paranoid picture. Devine reviewing the whole subject concludes as follows:—

"The not infrequent development in somatically ill patients has led to the acceptance of the diagnosis of psychosis with somatic disease, the type of somatic disease being then specified. Apart from toxicomanias, general paralysis and the various types of *deficiency diseases*, the assumption of a direct aetiological relationship between the somatic disease *per se* and the psychosis, is open to question. Unfortunately, when we study the previous history and the follow-up, we find in such cases the same incidence of previous attacks and subsequent recurrence of mental disease as in uncomplicated cases of functional psychoses, and the preceding and subsequent attacks show a variety of different precipitating factors.

The particular somatic disease which dignifies the diagnosis may play the *role* of a culminating or precipitating factor. Its improvement affects very little, either the course of the psychosis, or the future prognosis. In addition to the specific somatic disease, an analysis of the case history shows one or several of a series of complicating factors: many present a social and emotional mal-adjustment, personality aberrations, a family history of psychopathy and often previous attacks. Thus it would appear from the study of a number of cases that we must regard the psychosis as a separate entity which runs its natural course, the pernicious anæmia acting as the precipitating or aggravating factor".

This is a very sound position to take, and as a guide for further study very valuable.

The papers mentioned above besides dealing entirely with the syndromes of pernicious anæmia, are observations only on

European patients and by Europeans. As far as I am aware no observations have been made in India, on Indian patients, either by Indian or European observers. My contention is that the conditions in the west are entirely different—both in the nature of the somatic status of European, as well as in the factors that enter into his personality make up, from that of an Indian. Hence, though the studies may well form a guide, the conclusions cannot be accepted without reserve.

In the following paper, a preliminary attempt is made to discuss the inter-relationships of anæmic states and abnormal mental manifestations. A pooling of observations of different workers, preferably Indian workers under Indian conditions is necessary before definite conclusions could be drawn. But I strongly feel, that our physical and mental welfare cannot be divorced from economics with which are closely associated problems of politics and political freedom. Hence such studies are bound to be of considerable interest, although no final, unequivocal conclusions could be drawn at present.

Clinical

The association of mental disorder and anæmic state found in these hospital admissions raised a series of problems:—

1. What was the nature of the anæmia?
2. Could any definite relationship between the anæmia and mental disorder causal or otherwise be traced.
3. Whether the improvement in anæmia coincided with improvement in the mental condition?
4. What were the criteria for prognosis, as regards life, and as regards recovery from the mental stage.

The second problem of relationship between the anæmia and the mental state could further be subdivided into:—

- (i) Whether any relationship could be discovered between type of anæmia and the type of mental disorder?
- (ii) Whether the mental reaction was in any way dependant on the severity of the physical disorder?

So the problems actually involved two sets of diagnosis:—

- (a) Physical and (b) Psychiatric;

Of course no claim is made in this paper for any solutions of the problems, but the conclusions are however suggestive; they await confirmation by more intensive study.

The Nature of the Anæmias

Out of 82 patients investigated, 52 were women, and 30 men. The diagnosis of anæmia was made (1) Clinically, (2) Pathologically; no detailed pathological investigation was undertaken except the measurement of the colour index, the blood count, and hæmoglobin index. Blood picture was noted in every case, with reference to abnormal cells. But no other detailed investigation like measurements of diameters of R. B. Cs., Price. Jones Curve, fragilities of cells, sedimentation rate etc., were undertaken, partly because it would have needed outside help, and chiefly because it was not essential for the present purpose.

It might be mentioned that in no case was the blood picture confined entirely to microcytes, without at least one or two megaloblasts being present, may be once in three or four fields. The variation was only in numbers. In women, the predominant cells were microcytes, with colour index lower than one, whereas in men, the majority had a colour index one or greater than one, with a large sprinkling of megaloblasts. That is, in the latter group the nature of the anæmia was allied to the syndrome termed pernicious anæmia.

Clinical Symptoms

General pallor, dryness and coarseness, of the skin formed the usual feature in about 90% of both men and women.

In about 60% of the women and 30% of the men, Jaundice was prominent: (Hæmolytic). In the more severe of the cases this was complicated (30%) by puffiness of the face; and oedema of the ankles. In 30 women and 15 men, hæmic murmurs and rapid pulse between 100 to 120 with a low tension was found. It was surprising, however, that in spite of this cardiac disability there was no irregularity in the rhythm of the pulse. A raw, uncoated tongue was found only in about 13 women and 9 men. In others there was thick fur. The patients had a daily rise of temperature at some time or other during the course of illness. The temperature would continue for three or four days at a time, and was always brought down by Cylotropine. Flabby muscles with lessened reflexes and alteration in sensitivity, usually in the direction of a lowered threshold were the usual neurological symptoms. Pains and aches were complained of at some time or other.

Diarrhoea was a distressing complication, difficult to control, and often ending in death.

Treatment.—Routine treatment consisted of daily injections of Campolon for anæmia (starting with five C. C. and reducing

it to two C. C.), of Cytotropine, intramuscular, daily, as long as the temperature continued, and Coramine 2.5 c.c., as a stimulant whenever required. Dram doses of Bismuth Salicylas and Coramine, with feeding only on orange juice and glucose water were chiefly relied on in diarrhoea. For restlessness, hot baths and medinal. Diet whenever possible included plenty of marmite, with glucose and orange juice. Iron as Bland's Pills was used cautiously in the presence of gastro-intestinal disturbances, since small doses produced constipation and large doses induced diarrhoea. Insulin in small doses was used where the appetite was particularly bad. For the oedema, rest in bed and warmth, with small doses of pandigal and digitalis was in most of the cases sufficient. Salyrgan had to be given in only three cases, two of whom died. In all these cases, on account of the restlessness and negativism, the problem of feeding is a very real one. A good deal depends on the tact of the nurse and attendants. But it was found, in every one of the cases, sometime or other, nasal feeding had to be resorted to. The period, however, varied from one week in mild cases, to two months in severe cases. It might also be mentioned that with improvement in the physical condition, there will be an intense craving for food, far beyond the capacity to digest. One has to go very slow, else intractable diarrhoea will set in.

Disension: Physical Aspect.

In the above groups, cases of child birth, prolonged illness, and causes usually quoted for secondary anæmia were excluded as far as possible. Hence the physical diagnosis amounted to anæmias, Hyper- and Hypo-chrome with causes not clearly known. But, however, the history of these patients revealed that they were largely drawn from city areas. The majority of them were vegetarian, living in houses which were insanitary, and with an economic conditional marginal. An exception in the economic condition was in about 15 cases drawn from the merchant classes (Vaisya community). The conclusion was tentatively that these anæmias were largely nutritional. The evidence so far seems to be only negative. But on the positive side in about 10 of these cases an actual diet which the patients were accustomed to have, was gone over in detail, and was found lacking in milk and milk products and in fresh fruit and vegetables, but with plenty of curry powder and spices, and with rice as the principal article of diet. Evidence of under-nutrition in almost all of them and mal-nutrition in a good many was in evidence. While writing

this paper an article in the Lancet of March 14th by Dr. Hutchinson has appeared on the "Nutrition Question". He comes to the conclusion, that in England there is no wide spread under-nutrition and the mal-nutrition that exists, is not necessarily due to poverty. In India, on the contrary, the question is largely economical, and poverty is the main consideration. And as I mentioned before, conditions in India are far from being comparable to conditions in the west.

Diseases due to defective nutrition may arise in a number of different ways:—

- (1) *An essential dietary substance* may be lacking in the food which is ingested. Most of the disease syndromes which have been observed following nutritional experiments on animals have been produced in this way. Beriberi in human beings probably belongs to this category.
- (2) *A relative deficiency* may be produced in one or more factors if the diet contains a disproportionately large amount of one food. The common occurrence of pellagra in people who live on cornmeal diets may be explained by this hypothesis.
- (3) The food *may be lost* from the gastro-intestinal tract before sufficient time has been allowed for absorption. This happens with persistent vomiting or diarrhoea.
- (4) There may be a lack of some secondary factor in the body which promotes the utilization of one or more of the essential food substances which have been ingested. The intrinsic factor demonstrated by Castle to be absent from the stomachs of patients with Addisonian pernicious anæmia is the outstanding example of this kind of condition.
- (5) *The intestinal tract may be incapable of absorption* of the essential substances. Strauss has recently described the various disorders of the gastro-intestinal tract which interferes with absorption in a manner that tends to produce deficiency diseases. The commonly recognised examples are chronic alcoholism and various forms of partial obstruction of the intestinal tract.
- (6) Certain *changes in the general condition* of a man may increase his vitamin requirements and a diet which has previously been adequate may prove to be inadequate under the new circumstances. According to Cowgill, increase in metabolism tends to increase the vitamin B (B₁)

requirements of both man and animals. Infections which produce fever increase the vitamin requirements in this manner. Infection may also disturb the gastro-intestinal tract and ultimately its ability to absorb the essential food factors.

- (7) In considering whether any diet may be adequate for a particular patient, the fact that there are large individual variations in the dietary requirements must be considered. *Constitutional* qualities are of great importance, but are extremely difficult to evaluate in a particular patient, yet there is no doubt that some individuals can live satisfactorily on a diet that would mean serious disability for others. For example, many people have little or no acid in their stomachs while the majority of men are well supplied. This lack of acid may be a reflection of other defects that tend to make these people develop pernicious anaemia more readily than those whose stomach content is normal.

In the cases studied for the purpose of this paper, all the above factors mentioned, operated some time or the other, singly or in combination during the illness; some as aetiological factors, and the rest as complicating factors during the course of the disease.

Psychiatric Aspect

So far I have dealt only with the purely physical aspect. On the psychiatric side the following observations are suggestive:—

- (1) It was found that irrespective of the nature of the anaemia every patient who was acutely ill exhibited a relatively constant reaction pattern, namely that of confusion, clouding of consciousness, disorientation, defective memory, feeble recognition, restlessness, sometimes amounting to mania. The restlessness was probably the response to visual and auditory hallucination. The total picture was that of profound toxæmia of the C. N. S. In cases still more severe, there was actual stupor alternating with muttering delirium.

As patients improved this confusional state gave place to reactions which were very different. In those cases in which one could give a favourable prognosis, the confusion was replaced by emotional instability, weeping or laughing without cause and theatrical behaviour. This gradually became less and less noticeable till the patients were fit for discharge. The time period

varied between 3 to 5 months. The severity of anaemia referred to has reference only to the individual in question, and is not a statistical relationship, because, for example, two patients with the same R. B. C. count did not exhibit the same reaction. It was noticed, however, in general that patients with a large colour index exhibited paranoid symptoms which became more or less fixed even with improvement in their blood picture, confirming the findings of Western writers.

Amongst the 82 cases there were only 11 deaths due chiefly to factors like sepsis, diarrhoea and heart failure. In the 71 cases that recovered 52 were discharged more or less normal. And some of them are still under observation. In the remaining 10 however, in spite of physical improvement the psychosis, seems to have become fixed. The reacting types exhibited being both Schizophrenic as well as affective. This throws light on the importance to be attended to the anæmic factor in its relation to the mental disturbance. The terms causal and precipitating are terms which mean nothing more than having reference to the distribution of emphasis in the production of the disorder. In spite of the fact that there are a number of people who argue that the mental and the physical disturbance are only coincident, sometimes precipitating, and rarely in causal relationship. I feel enough significance must be attached to the fact that the profound physical disturbance in the blood which permeates every cell of the body, is bound to affect the whole organism, and not merely treated as affecting only the somatic status. Since the mental reaction is an expression of the total individual and since every cell in the body suffers, how can the total organism escape?

In that sense, I feel that the anaemias referred to are causal. This study though incomplete emphasises certain points;—

- (1) The importance of a physical examination in all cases showing the mental symptoms.
- (2) That poverty and mal-nutrition can be potential causes for mental as well as physical deterioration.
- (3) It is difficult to visualise a hard and fast differentiation amongst anaemias. In this connection the term Erythron used by Professor Boycott analogous to reticulor-endothelial system deserves attention.

Epilogue

While writing this paper, I have been asked by a number of my medical friends, as to the reasons why I am stressing the

organic factor in the Etiology of mental disorder in India although my training has been essentially psychological. If we visualise for a moment, the factors entering into the production of mental abnormalities, this apparent contradiction will disappear. I have mentioned several times in my previous communications, that mental disorders are not diseases *sui generis*, but are analogous to syndromes in general medicine. Syndromes (ataxia, paraplegia) are groups of symptoms occurring in a particular pattern but due to multiple factors. Even in general medicine, causation of disease is multiple and it becomes much more complicated in psychological medicine.

I cannot do better than quote Devine again in this connexion :—

“At the outset, therefore, it has to be recognised that the problem of causation in the psychoses is surrounded with peculiar difficulties, for in them we observe the same manifestations related to different stresses, as, for instance, a confusional psychosis following psychic shock or a specific fever, and also dissimilar manifestations following the same stress, as observed in the manifold reactions to alcohol. We have, however, already drawn attention to the fact that in physiological maladies where the reactions exhibited can be traced to the malevolent influence of a specific agent, these reactions are extremely variable, and are, therefore, the expression of a multiplicity of causal factors, some of which are extra-individual and have reference to the general conditions of life. Syphilitic reactions, for instance, are not only “due” to the fact of infection; they are also related to the conditions obtaining in social life—late marriage, inadequate instruction in sexual hygiene, etc. In this way general medicine becomes linked up with social psychology. An advance in medical knowledge consists on elucidation of ever-increasing causal relations—in connecting facts and events, on the surface having no relation to one another, which can be shown to have a bearing, immediate or remote, upon the development of the morbid phenomena it is desired to explain. Thus the problem of variability, and its necessary corollary—a multiplicity of causal relations—is one which is common to both general medicine and psychiatry”.

The background for the development of any disorder, physical or mental might either be organic or psychological and frequently both. In India, however, with its appalling poverty, undernutrition and malnutrition, inclement climate, the

constitution is so enervated that it is a fertile soil for the development of any kind of disorder. The only wonder is that the number of people who are afflicted is not more.

Given however, such a background, the prepsychotic personality of the individual, and the immediate stresses and strains of his environment, determine the “form” as well as “Content” of the mental disorder. In India, the discords incidental to a joint family system, such as financial trouble, quarrels between brothers, between sisters-in-law, the mother-in-law trouble, and in women specially unhappy, but inevitable married life, are important factors in determining the “Content” of a mental disorder—hallucinatory and delusional. It is not sufficiently realised that mental mechanisms like repression, sublimation etc., are operative not only in the mentally disordered, but also in so called normals. For a human being to lead a social existence, inhibitions and repressions are essential. But their intensity, duration, and distortion, in a favourable background determine symptom formation and the course of mental disorder.

I have strayed far enough, from the original object of my paper. But I thought it necessary to do so, because these are matters in which there is considerable misapprehension, and incorrect information in the public mind, largely due, I fancy, to psychoanalytic jargon published in popular periodicals, and in cheap literary “psychological” thrillers.

I cannot conclude better than quote a paragraph from William White, one of the leaders of Modern American Psychiatry, leaving it to the readers to contrast the vast difference between Indian conditions and conditions in the West for possibilities in the production of mental disorder?

How few lives in India are comparable to the following sketch :—

“The cause of neurosis is usually put down as overstrain, mental or physical. The so-called strenuous life of the present day is believed to be responsible for many cases. The strenuous life, however, has offered material for criticism for hundreds of years. Cicero wrote against it in the old Roman days; what to my mind is more characteristic of the times, not in opposition to all other times, but in distinction from the period of the immediate past is idleness, especially of the women. The women of the well-to-do classes have literally nothing to do. Immense corporations make and provide, not only all the necessities but all the luxuries. Servants do all the manual work and there is nothing left for her. She is therefore

constrained to lead a life of comparative uselessness and idleness. It is a life, however, that does not satisfy. In addition to its uselessness it becomes a life of longing for something usually in-definable, a life of shattered hopes, of ambitious longings that don't come true, of unfulfilment. Having no outer interests the thoughts naturally turn to self and in this factor is laid the foundation of the hypochondria that these patients suffer from, the eternal complaining of little nothings. Having lost their touch with reality and become self-centred, their own ego occupies a too prominent place in their perspective. Their world is a world in which they occupy the central point. Everything has some relation to them, they become suspicious, carping critics, gossips and scandal mongers. To try and escape from this inner suffering, they often engage in a delirious round of social functions and breakdown apparently from over-exertions in keeping up their social duties. This is however, the only obvious cause, the real cause lies much deeper. Being somewhat physically tired, having failed, having no real interest, they are different to all except their personal sufferings. Exertion is only exertion and serves no special ends, fits in nowhere as a link in a well-connected, coherent chain of events, so they end by being unable to exert themselves at all. Even getting up and dressing is too much; they stay in bed". (White's outline of Psychiatry).

Mental Hygiene in the Provincial Health Service

Fleming, Grant, M.C., M.D., *Amer. Jour. Public Health*, Nov., 1935, Vol. 25, p. 1205.

In his well-known and clear-cut style the author presents his reasons for Public Health Services becoming more cognizant of and more active in respect to mental disease among the earlier age groups in the community, because, to quote his address, "mental disease, mental disorders, and a host of great and small defects in personality constitute a greater deterrent to individual happiness and socially acceptable lives than do the corresponding abnormal physical states".

Outside of those who obviously stand in need of institutional treatment, health authorities should provide training institutions for the adolescent "born with those varying degrees of low intelligence which demand special educational facilities if each individual is to be trained so as to be, within the limitations of each, self-supporting, socially acceptable citizen".

Among the many reasons advanced in this very admirable paper, which limitations of space prevent any extended reference thereto, one might simply quote from the author's summing up—"there must be a program of public education.....adequate instruction in professional schools; there must be organized mental hygiene clinics, staffed from mental hospitals", and voluntary mental hygiene agencies be encouraged to continue their pioneer work under official guidance.

A careful reading of this contribution will well repay those whose interests lie in this important field of endeavour.

(N. MacL. H.)—*National Health Review*.

ON THE EFFECTS OF ALEPOL ON LEPROSY*

BY

DR. LOIOLA PEREIRA,

Director of "Leprosaria Central of Goa."

No doubt India can boast herself of having found a remedy for Leprosy long before any other country had knowledge of any means to alleviate this horrible disease.

The first Indian treatment was based on the action of Chaulmougra on Leprosy lesions, and so efficacious has it proved to be through centuries that even now it is used in spite of the great progress of culture in general and the knowledge of Leprosy in particular.

Of course the modern treatment of Leprosy is far from having any resemblance to the old, consuming powdered Chaulmougra seed or even its oil in crude form which has shown to be pernicious to the stomach and the digestive functions.

Chemistry together with physio-pathology has shown to us that Chaulmougra oil is well a compound of various elements of which some are more active than the others, some more manageable than the others.

Rogers working on this line for long isolated and studied, some years later, the action of sodium hydnocarpate on the Leprosy lesions and the Firm of Burroughs Wellcome & Co., London, accordingly prepared it with fatty acids less irritating extracted from Chaulmougra oil, at a certain point of fusion and placed the same in the market under the name of *Alepol*.

Since then the discussion between various authors centred round this point. There were some who were fully satisfied with the results obtained (Rose) to such an extent as to make *Alepol* the basis of general treatment in their institutions; there were others like Dr. Veras and Eubanas who abandoned its use as it did not give any result on the Lepers even after a long treatment; there were others still who accused it of producing endophlebitis, irritations and various other local complications.

Cochrane, recently in his book "Leprosy, Symptoms, Diagnosis, Treatment and Prevention" referring to *Alepol* shows how the manipulation, though very delicate, has to be done to avoid the different difficulties and complications, which have been found by many authors, during and after the injections.

* Specially contributed to 'The Antiseptic'

Read studied the pernicious action of sodium hydncarpate on kidneys in particular and found that on animals like rabbits and dogs it produced albuminuria, emaciation and loss in weight.

John Lowe concluded from his experiments that sodium hydncarpate has no bactericidal action *in vitro* on *M. Leprae Muris*.

To these various opinions authorised from different points we shall add our own observation on the effects of *Alepol* in Leprosy on some patients of Leprosaria Central de Goa.

The sodium hydncarpate is soluble in water and can be given in injections, intravenous, intramuscular, subcutaneous or intradermal. We use *Alepol* only for intravenous injections with solutions of 3% in distilled water duly prepared by Laboratories of Hospital Central de Nova Goa.

The treatment is started with injections of 1 c.c. increasing successively by 1 c.c. up to 5 c.c. continuing after with this dose-injecting never more than 5 c.c. at a time. The number of injections given exceeds 1700. In all 61 patients of various types were treated, 41 being of mixed type of initial cutaneous and 20 of more advanced types.

There were patients that received even 70 injections. In spite of all the precautions the endophlebitis and local inflammations were frequent.

The leprosy reactions with fever, neuralgic exacerbation, increase in number of cutaneous lesions, with consequent physical weakness were more frequent than in other less hurtful treatments which we followed. The *Alepol* treatment was suspended during the period of reaction and started again with the initial dose of 1 c.c. of solution. But what grieved us more than anything else is the 7 tragic deaths that occurred during the course of treatment due to nephritis and renal complications. Lepers relatively healthy, not very old, suddenly, as if struck by a bolt, were attacked with acute anuria with lumbar or abdominal pains, a general restlessness, dyspnoea with Cheyne-Stokes-rhythm, followed by death within a few hours. Only one survived for some days, but to save him was not possible.

Of course we cannot attribute these cases of death exclusively to *Alepol* but after above-cited work of Read we cannot help making it responsible at least in part.

Except these accidents the treatment did not keep us from giving a result to some extent consoling, however out of 41 Lepers of mixed types initial cutaneous lesions 10 or rather about a quarter of them were considerably better. Lepers of the more

advanced type did not get worse but remained in the same state. In these groups there were 10 patients that received only 8 injections, which number can be considered insufficient.

5 patients some of whom abandoned the treatment on account of the reaction were worse. We could observe remarkable improvements in a case of type C 1, N 1 only with 4 injections or say within a month and one of type C 1, N 2 with only 8 injections.

Our observations can be summarised as under:—

Type.	Better.	Worse.	Unchanged.	Total.
C 1, N 1	2-28, 5%	2-28, 5%	3- 45%	7
C 1, N 2	3-43%	—	4- 57%	7
C 1, N 3	1-12, 5%	—	7- 87, 5%	8
C 2, N 1	3-23%	1-8%	9- 69%	13
C 2, N 2	1-16, 8%	1-16, 8%	4- 66, 4%	6
C 2, N 3	—	1-33, 3%	2- 66, 7%	3
C 3, N 1	—	—	3-100%	3
C 3, N 2	—	—	1-100%	1
C 3, N 3	—	—	1-100%	1
C 1,	—	—	4-100%	4
C 2,	—	—	1-100%	1
— N 2	—	—	3-100%	3
— N 3	1-25%	—	3- 75%	4
— N 1	—	—	1- 100%	1
Total ...	11-18	5-8, 2	46- 75, 4	61

Some of the lepers that improved could even be called cured, as in fact they were but we have been very strict not to call them so, not only because the Institution under our care is just in its initial stage but specially because the lay people around us here are still with the idea that "once a leper always a leper".

Conclusion

Solution of *Alepol* like the one we used has not a sure beneficial effect upon all the types of leprosy neither it is completely inoffensive. Nevertheless some patients specially of the mixed type with predominating initial cutaneous lesions have been considerably improved and other more advanced stationary in their evolution, the percentage being very small of those who got worse.

CASES AND COMMENTS

PHOSPHORUS IN MATCHES CAUSES ACUTE
PERICEMENTITIS

DR. S. K. GUPTA,

Surgeon Dentist, Durga Charan Road, Ambala Cantonment.

THE following account of a case of acute pericementitis which a heavy smoker contracted through repeated inhaling of the phosphorus in the matches with which he lighted his cigarettes, may be of interest.

The 'patient' is myself. I am aged 24 and smoke an average of fifty native-made cigarettes daily, using fifty matches to light them. My habit is to light the cigarette from the head of the match as soon as the phosphorus flares up, with the result that the phosphorus is inhaled.

One morning I felt an acute pain in the gums around the roots of my upper central incisors. There was a little loosening of the teeth, but otherwise they looked quite healthy, with no decay and no gingivitis whatever. I consulted a brother dentist—Mr. Sena Pati, at Ludhiana and although we both agreed that it was a case of pericementitis, we could not find the cause.

On thinking the matter over there flashed through my mind the thought that the condition was due to the phosphorus in the matches with which I lighted my cigarettes. I at once stopped my practice of lighting up in the flare of the match head and waited instead to secure my light from the flare of the burning stick. Although I continued smoking my 50 cigarettes a day, my teeth were spontaneously cured without any treatment and I was quite well. After sometime I totally left up this bad habit of smoking and found myself as healthy as anybody and my mouth is in a very good condition having no sign of pericementitis at all.

This convinces me that the cause of the pericementitis was the phosphorus in the matches, and I am now wondering how many other cigarette smokers are suffering from the same complaint for the same reason.

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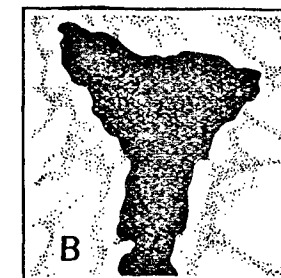
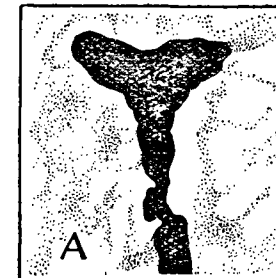
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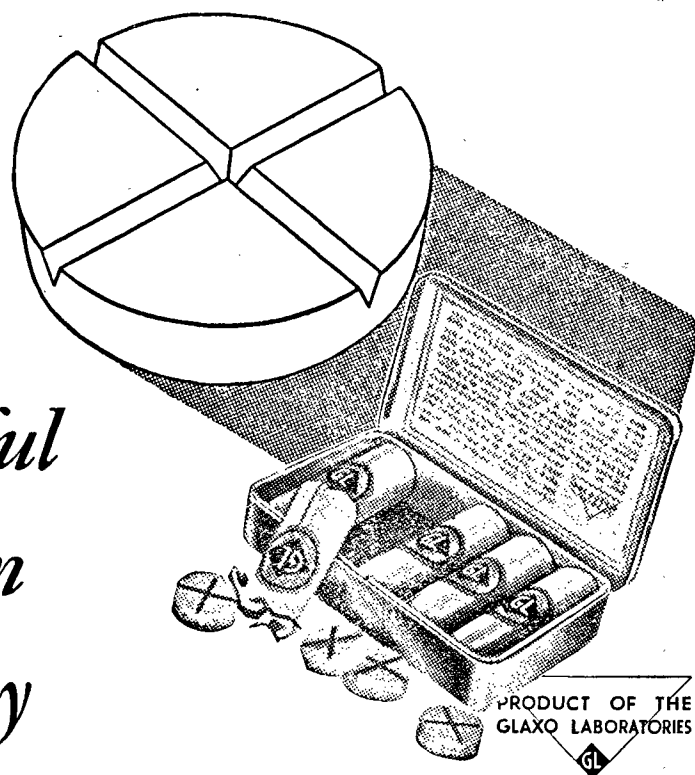


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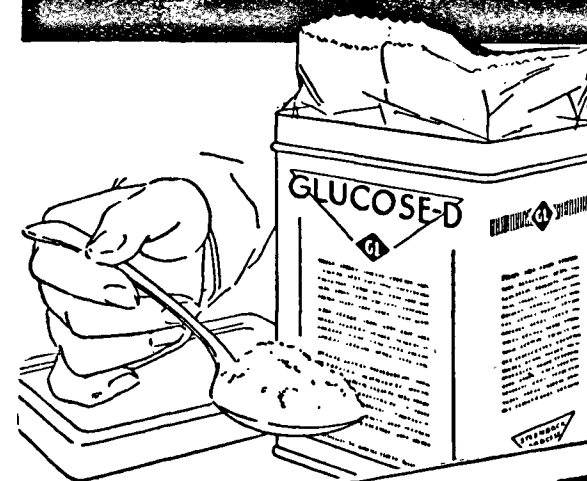
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THIO-SARMINE IN THE TREATMENT OF SYPHILIS

BY

DR. U, SOE MIN,

Physician and Surgeon, Pantanaw, Burma.

I HAVE been using Thio-Sarmine for the treatment of syphilis for the last two years and find it very helpful in every case. In many cases I have been able to try the full course of treatment. The following are some of the cases of my patients who had undergone Thio-Sarmine treatment.

1. A young man of twenty had a primary chancre, three or four months back. Since a week he was feeling very much depressed and weak. He had been complaining of pains in the joints, headache and sleeplessness. On his hands and legs were found eruptions of the skin. He was treated with Thio-Sarmine and Bismuth. The total quantity of Thio-Sarmine injected in this case was 4.8 grams. The symptoms completely disappeared and then he was put on potassium iodide mixture. He was alright within a week.

2. A girl of nineteen had secondary syphilis with pregnancy. Her uterus was enlarged due to conception and reached midway between ensiform cartilage and umbilicus, inguinal glands enlarged on both sides, elephantoid condition of the labia minora, hard chancre present on fourchette and posterior vaginal wall, profuse mucopurulent discharge from the vaginal and cervical canal, and labia minora elongated. She was treated with Thio-sarmine. Everything came out well within a few day's time.

The coming of Age of the Gonococcus

"That forgotten germ, poor relation of the bacteria, the lowly and plebeian gonococcus, erstwhile soiled and spoiled darling of the 'clap doctors', is at last receiving a measure of honor. A movement is under way calculated to confer real dignity and self-respect upon an outcast organism. Organized medicine has been diligently at work for two years laying a foundation for a more intensive study of and research upon the gonococcus and for 'solicitation of financial support commensurate with the biologic, medical, social, and economic importance of the subject'—all of which is set forth in the report of a special committee (Ruth B. Thomas and Stanthope Bayne-Jones—"Amer. Jour. Syph. Gonorr. and Ven. Dis." (Supp) 20: 9, Jan., 1936.)"—thus observes the Editor of 'Medical Times and Long Island Medical Journal' in his editorial of June, 1936 issue, p. 195 and humorously concludes:

"Think of all the years that it has been down in the gutter consorting with quacks, how it has been snubbed even by urologists, and how it has been exploited by unscrupulous business factors. It's about time that humanity got a break on this score. At last it is to be taken seriously and properly dealt with, not as a mere guerrilla or bandit, but as a great divisional commander of royal rank, constantly and ably menacing a vulnerable flank".

"All hail, thane of Cawdor.....that shall be king hereafter!"

LEXIN AND SNAKE-BITE

BY

B. K. MAITRA, L.M.P. (Bengal),
Purabsarai, Monghyr.

ON 30.5.36, at about 5 P. M. a girl came to the Charitable Dispensary of Dr. P. Banerji (the inventor of Lexin) at Mihijam, Santhal Parganas and reported that her brother's condition had become alarming after the bite of something in his hand at about 3 P. M. while he was playing in the field. On enquiry she said that the boy could not say what had bit him as it disappeared into the tree-hole nearby and that the boy vomited twice after the bite and some froth was coming out of his mouth.

Dr. Banerji and I went to see the case with a phial of Lexin. We saw the boy in the following condition :—

The boy was in a semi-conscious state, with froth in the mouth, pulse, imperceptible at the wrist, heart-beat rapid, median basalic and other veins were collapsed, the whole body was cold with profuse sweat, respiration, hurried, rattling sound in the throat and moist rales all over the chest.

On examination, two fang marks of the bite were found on the palm of the hand about $\frac{1}{4}$ inch apart. On incision no blood came out (haemolysis) nor any broken fangs could be detected. There was not so much burning pain after the bite as in the case of scorpion-bite. The boy was 9 years old, Jatin by name. There was no ligature.

Dr. Banerji diagnosed it to be a case of Krait-bite. We administered inhalation of Lexin at once. After an hour there was a little change in the body-heat and a thready pulse could be detected at the wrist with great difficulty. As the veins had collapsed we injected 1 c.c. of Lexin into the gluteal muscle. Inhalation of Lexin was continued forcibly with the mouth closed, as the boy refused to inhale (this is nearly always the case). Within half an hour the pulse returned almost normal, the body-heat increased, and the respiration became almost normal. Hot tea and sugar-solution were given as stimulants and he was brought to the Mihijam hospital where some sweets were also given. We advised the attendants to keep the boy wide-awake the whole night and continue the inhalation of Lexin. This they neglected to follow. At about 3 A. M. the boy relapsed into the same condition in which we first saw him. Another 2 c.c. of Lexin was given (intramuscular) as no blood came into the

syringe when the vein was punctured (Haemolysis) and inhalation was vigorously carried out. In the morning the boy's condition became normal and some chura and dahi were given as food after giving him a good cold bath. At 11 A.M. he was discharged cured.

Points of interest :—(1) Veins collapse, there is haemolysis: so difficulty arises in giving I. V. injection. (2) Patients refuse to inhale, the odour being very strong, but inhalation must be forcibly carried on with the mouth closed, as it is essential. (3) Being an alcoholic preparation, it is quickly absorbed, if injected into the muscle.

HERPES ZOSTER

BY

DR. N. CHATTERJI, M.B.
Bartalla, 24 Parganas.

Is an acute disease characterised by the eruption of a group of vesicular lesions, along the course of a sensory nerve—the eruption is preceded, accompanied, or followed by disturbance of sensation.

Etiology.—1. *Idiopathic.*—Some have suggested Streptococcal reaction, the nerve Ganglia through the skin along the peripheral nerve.

2. *Constitutional* (a) Syphilis, (b) Diabetes, (c) Oral Sepsis.

3. Alcohol.

Pathology.—It is said in every case there is an inflammatory lesion of the posterior root ganglia, through which the affected Sensory nerve passes. I shall illustrate 4 groups of cases, found within the last five years, which will demonstrate, how there is another factor, the Metabolic factor at fault. In these cases, the patient suffered from urticaria for six or nine months previously which persisted. I think the faulty metabolism is the predisposing cause in all these cases.

Case No. 1.—Syphilitic.—Nirode, H. M.—a spinner, aged 38, attended this dispensary in the month of November 1932 for Urticaria which persisted for 3 months.

In the month of March, 1934, he was suddenly seized with acute pain in the Supraorbital region, which persisted for 3 days, then he developed typical Herpetic eruption from the forehead to the chest of the right side, pain and burning sensation persisted for a month when his blood was examined for W. R. A strongly

positive reaction put us in right track; one injection of NAB. .3 gr. relieved him of all symptoms except his herpetic ulcer on the Cornea, which persisted for sometime; he took only a course of 4 injections and became symptom-free.

Case No. 2.—Diabetic.—Heralall Tewari, a Durwan, aged 55 years had persistent attack of Urticaria for 3 months from March till May, '34. We failed to relieve him including dietetic restrictions (he was sensitive to all food). Adrenalin, Calcium, Salicin Salt failed to relieve him; so he went to his native place in U. P.; where he was cured naturally. After a month he developed typical Herpetic eruption along the course of the Ulnar nerve. The pain was so very acute that Morphin G. 1/3 B. D. had to be injected for a week and Liq. Opii Sedativus M. xxv. per dose continued for two months before his pain could be brought under control. His urinary sugar was 4%. Insulin 40 units per day, plus diet control, and 35 applications of diathermy controlled his pain and relieved him of all symptoms. He is still left with a slight stiff joint.

Case No. 3.—Oral Sepsis.—Salamat, a M. M., aged 38—had off and on attacks of Urticaria for 2 years during the month of February 1934. He developed such a severe Urticaria, which we failed to relieve, but which was cured subsequently by taking two pills a day (containing ½ Chatack of plum-leave and Gour) for seven days. After an interval of 3 weeks, he developed intercostal herpes neuralgia, the burning pain persisted for a month. Opium relieved him of his pain. He was sent to a dentist who extracted his 5 teeth; six days after the extraction, he felt completely relieved of all pain and symptoms.

Case No. 4.—Alcohol—Kalo, a H. M., Toddy vendor developed general Urticaria for 10 days, which was relieved only after stopping rice. After 2 months he developed Herpetic eruption along Ulnar nerve, pain preceding and persisting even after the eruption had lasted for a month. It was definitely found he got a little relieved of the pain when he drank toddy to the point of intoxication but the pain grew worse the very next day, if he abstained from drinking. Ten applications of diathermy was made, but he felt worse after the day he drank toddy. Thinking that "Toddy" had something to do with his neuralgia, I stopped his toddy and relieved his pain with Opium for ten days. Gradually reduced his Opium. He is tea-totlar to-day free from all symptoms.

I am grateful to Prof. Dey and Dr. F. McCay for their valuable suggestions.

ACUTE CATARRHAL CHOLYCYSTITIS AS A COMPLICATION OF INFLUENZA

BY

DR. N. CHATTERJI, M.B.,

Bartalla, 24 Parganas.

OF the various complications of Influenza like Otitis Media, Synusitis, Laryngitis and Pneumonia, acute inflammation of the Gall-Bladder seems to be a fairly common one, although little mention of the fact is found in text books and less so in case reports. As many as 25 cases came under our observation and treatment in the course of 3 years, 1932—34, a thorough study of which convinced us of the liability to overlook the correct diagnosis. We produce here a record of only 8 of the cases presenting different symptom combinations.

The onset in majority of the cases was sudden and rather violent, but gradual and milder in others. Age variation was from 7 years to 38 years. The early symptoms were as follows:—

- (1) Chilliness followed by fever ranging from 99 to 103°.
- (2) Headache, pain in the back and legs.
- (3) Running from the eyes and nose (half the cases).
- (4) Extreme prostration.
- (5) Constipation in majority of cases and Diarrhoea in some.

There is nothing constant about the fever curves. After 3 or 4 days of the above symptoms, 10 cases complained of pain in the region of the Gall-Bladder and in 8 cases the Gall-bladder was enlarged and tender, the muscle over the Gall-bladder region was rigid, and there was vomiting, but no jaundice. In all these cases the tenderness was located at the right Hepatic region, but more pronounced at the tip of the 9th Costal Cartilage. There was no mortality.

Table Showing Number and Description of Cases.

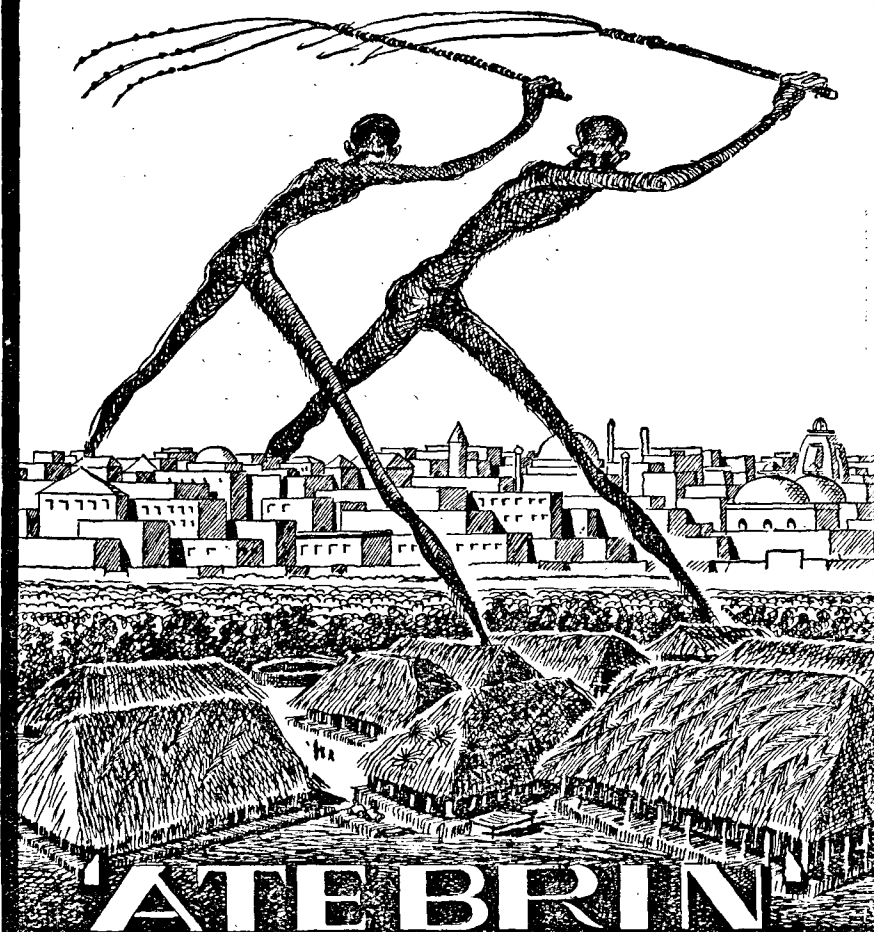
NAME.	AGE.	SEX.	ONSET.	DURATION.	SYMPTOMS	W. B. C.	TREATMENT.
Nurjahanbibi.	7	M.F.	Running from eyes and nose 2 days, slight fever.	12 days.	After a day's interval patient suddenly seized (i) with acute pain in Epigastrium with temperature 101°. (ii) Marked tenderness in gall-bladder region 3rd day with rigidity rectus. (iii) Vomiting.	6,000 Appx'	(i) Symptomatic. (ii) Selective Cholyceystitis Vaccine. (iii) Opobyl.
Khoda Box.	28	M.M.	(i) Supraorbital neuralgia. (ii) Temp. 100° (iii) Passing of blood from left nose. (iv) Prostration.	4 Weeks.	(i) After an interval of 3 days patient was suddenly seized with acute pain in right hypochondriac region—3rd day. (ii) Tenderness marked 4th day. (iv) Gall-bladder palpable on 12th day. Fever 101° to 104°. (v) Vomiting.	10,000	(i) Symptomatic. (ii) Cylotropin Inj. (iii) Selective Cholyceystitis Vaccine.
Sahaban.	18	M.M.	(i) Sudden, (ii) Rigor, (iii) Fever 104°.	3 Weeks.	(i) Broncho Pneumonia left lung on—3rd day. (ii) 11th day tenderness, pain, gall-bladder region. (iii) Rt. rectus rigid. (iv) Temp. 101°—103°.	15,000	(i) Symptomatic. (ii) Cylotropin Inj.
Kothajabibi.	35	M.F.	(i) Sudden with Rigor. (ii) Extreme Headache (iii) Vomiting. (iv) Running from eyes and nose 3 days before fever.	2 Weeks.	(i) Inter. Temp. 98°—101°. (ii) Tenderness and enlarged gall bladder. (iii) Constipation.	6,000	(i) Symptomatic. (ii) Neotropin Tab.
Patchoo.	32	H.M.	(i) Sudden with Headache, running from eyes and nose.	15 days.	(i) Pain and tenderness near gall-bladder region. (ii) Fever 99°—103°. (iii) Diarrhoea. (iv) Vomiting.	4,600 No M. P.	(i) Symptomatic. (ii) Cylotropin Inj.
Fulkumary.	28	H.F.	(i) Gradual with Malaise. (ii) Laryngitis 1st day. (iii) Bronchitis 3rd day.	3 Weeks.	(i) Pain and Tenderness in the region of gall-bladder—5th day. (ii) Gall-bladder felt enlarged to the level of Umbilicus—8th day. (iii) Fever 102°—103°. (iv) Constipation. (v) Nausea.	15,000	(i) Symptomatic. (ii) Selected Cholyceystitis Vaccine; on 15th day, Temp. dropped but gall-bladder remained enlarged.
Sadatullah.	18	M.M.	(i) Sudden with acute middle ear pain and discharge.	7 days.	(i) No pain but tenderness felt at the tip of the 9th Costal Cartilage—3rd day. (ii) Constipation. (iii) Temp. 99°—100.5°.	8,000	(i) Symptomatic. (ii) Neotropin Oral.
Golam Nabi.	38	M.M.	(i) Sudden severe headache. (ii) Pain all over body. (iii) Prostration.	10 days.	(i) Tenderness and pain at the tip of the 9th Costal Cartilage. (ii) Rigid rectus. (iii) G. B. could not be felt. (iv) Temp. 99°—101°.	7,000	(i) Symptomatic. (ii) Salotropin Inj. (Bio. Chemical).

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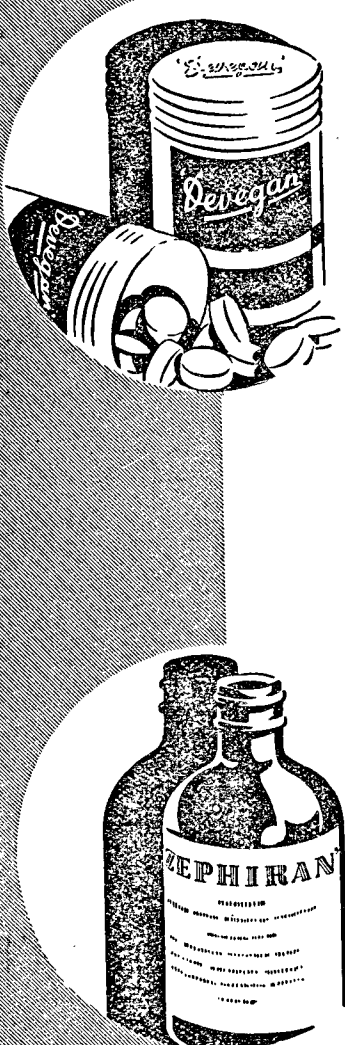


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EDITORIAL

NUTRITIONAL RESEARCH

WITH the rapid advancement of Medical Science, the old order hath changed, giving place to new, in regard to the causation of diseases. At one time, air was found to be the chief culprit, then came water, insects, visible and invisible, followed next, and now food is accused of as being the principal causal factor. During the past ten years and more, nations discovering the human race fast deteriorating in their health and strength, despite over-abundance of food-supply, began to pause and consider what exactly was the cause of this declension. Evidently, there was something wanting in the nation's diet which was responsible for their low vitality and physical and mental inertia and inefficiency. Research works were started in all the civilized countries of the world and experts found out that nutrition was lacking in the diet. The problem thus has resolved itself into:—

- (1) What constitutes a nutritional diet with due regard to age, climate, habits and idiosyncrasies of the people?
- (2) What is the quantity and duration of feeds? and
- (3) How best to improve the production and marketing of the food-stuffs so as to afford the greatest good to the greatest number.

The recent world depression gave further impetus to the investigation. How to provide, with nutritious food, the unemployed masses whose numbers have reached alarming proportions, everywhere throughout the world, and people, whose incomes have come down to the lowest possible ebb, as a result of world

depression, has become quite a problem of problems for researchers to solve. The League of Nations, whatever may be its lapses, follies and shortcomings in the political field, in maintaining the world-peace, has acquitted itself creditably in its endeavour to establish world's health.

At the Cape Town Conference of the League held in 1932, the following was, *inter alia* agreed upon:—“(b) that neither preventive nor curative measures can achieve a marked degree of efficiency without the full co-operation between the administrative and technical departments of Government and the Health Department; (c) that most important in the amelioration of health conditions are measures directed towards raising the economic status of the population; this automatically results in the improvement of the two at least of the most important factors operating towards raising the standard of national health—i.e. nutrition and housing; (d) that education in elementary hygiene is one of the most important activities. This should commence in the primary schools where it should take the form of instruction in practical hygiene and not as is at present too often the case, theoretical instruction in elementary anatomy and physiology”.

India has not lagged behind other countries in the matter of nutritional research. In fact, nutritional research “continues to occupy an important place in the programme sanctioned by the Indian Research Fund Association and at the laboratories at Coonoor, till recently under the direction of Major. General McCarrison (now Sir Robert McCarrison) a whole series of important departments have been developed”. Though an Institute of Nutrition such as already exists in many countries has not yet been established in India, the Coonoor Laboratories satisfy the basic requirements for progress. Sir Robert McCarrison had been acknowledged as an authority on Nutrition and was a great asset to India but yet, lack of funds stood in the way of Indians reaping the full benefit of his knowledge and experience. No comprehensive survey of the nutritive value of common food-stuffs of the different provinces of India has till now been attempted, though such surveys are being carried out during the last 10 years in other eastern countries such as Japan, the Philippines, Malaya, China and Ceylon.

Dr. Aykroyd, who has succeeded Sir Robert McCarrison as Director of the Nutritional Research Laboratories in Coonoor has noted as follows on this line of Research:—

“Knowledge of food values is essential if agricultural

policy is to be closely related to dietary requirements. In the U. S. A. for example, future agricultural policy may be founded on the ideal of supplying a ‘well balanced diet’ to the entire population of the country and, if this ideal is to be fulfilled, no estimate of the changes required in existing agricultural conditions could be made without precise knowledge of food values. Moreover, such knowledge is the essential basis of almost all public health nutrition work and of sound dietary education. Those concerned, also with the regulation of diet in institutions public and private, with teaching and propaganda work, etc., would find their problems simplified by the existence of authoritative tables of nutritive values to which they would turn. There appears to be considerable need in India for exact quantitative dietary surveys, the purpose of which is the correlation of diet with physical development, state of nutrition, the incidence of disease, etc. The collection of systematic knowledge about Indian foodstuffs would stimulate and facilitate surveys of this nature”.

We are glad, however, to learn that the I. R. F. A. has sanctioned the necessary expenditure to carry out these experiments and the formation of an Advisory Committee on human nutrition is perhaps the first step taken in this direction. The first meeting of the Nutrition Advisory Committee was held in Simla on 18th June 1936 and it was in the fitness of things that H. E. Lord Linlithgow, Viceroy and Governor-General of India, whose interest in the well-being of the people of this country has been already forestalled in his valuable report, as Chairman of the Royal Commission on Agriculture, should have been requested to open the meeting. In his short inaugural address, H. E. stressed the need not only for “the active prosecution of research in the field of human nutrition but also to the practical application in the homes of the people of the fruits of that research in terms of the diet of the population both in the rural areas and in the towns”. The question of how best to convey to the public the essential facts of diet in relation to health”, he said “is one that is deserving of close and sympathetic study by all concerned”. “I am entirely convinced”, he continued “that whether we are concerned to advance among the rural population improved agricultural practice, or better sanitation and hygiene or better nutrition, we shall find that our best endeavours will achieve little that will endure unless and until literacy is imparted to the women of the countryside. We may bring about some considerable

degree of improvement under the existing condition by means of intensive propaganda and close supervision. But, in default of female literacy it will be found that whenever supervision is removed, there will be a relapse into old-age customs and that within a few months nothing will be left of the better living that has been so laboriously inculcated". These are indeed words of wisdom and sympathy and it is up to H. E. Lord Linlithgow himself to see that his words are translated into action by the various Provincial Governments and that the Provincial Governments are not allowed to take shelter under the time-honoured plea of "no-funds".

Thus, we note, that research, literacy (especially of women-folk) and propaganda are, according to H. E. The Viceroy, essential to persuade people to take nutritious food and lead a strong and healthy life. But unfortunately there has been a lamentable gap in his speech, which in our opinion ought not to have been overlooked. We mean the economic aspect of the whole problem. Indian's poverty is proverbial and there is hardly one meal a day for a major portion of the population. How then can a poor Indian find the wherewithal to provide himself with nutritious foods which consist in milk and milk products, fresh fruits, green vegetables, meat, oils and cereals? The ordinary Indian knows even to-day, as did his ancestors, the nutritional value of these food-stuffs. But he reluctantly parts with the little he possesses in exchange for a few coins to meet his 'kist' or other unforeseen expenses such as marriages, funerals etc., or repayment of loan or payment of interest. If he has none to eat or spare, he suffers in silence, hungry or half-starved, turning a deaf ear to all propaganda. Unless, therefore, this economic gap is filled in, there is no use in research or propaganda and the money spent on them will be a waste indeed. Where a country is economically sound, where adequate steps are taken to protect its food-stuffs from adulteration and where importation of cheap artificial foods from foreign countries is prohibited and where marketing facilities are amply provided, there, the people will be prone to turn the food-stuffs they can produce or purchase to their best advantage.

A person with no knowledge of dietetics will instinctively select the foods his body requires for the maintenance of good nutrition, providing he has a free choice of diet and his purse allows it. Perhaps there may be danger of over-stuffing and here propaganda may prove helpful. But as Dr. Aykroyd has observed, such propaganda may become insulting if it is directed at a population struggling to feed itself on a totally inadequate wage or

allowance. What India sadly wants at the present day is 'economic uplift'. When the producing and purchasing power of the people is raised, their nutrition will automatically increase. Research and propaganda can then step in to correct errors in diet. To proceed with research and propaganda without any attempt being made towards economic uplift of the masses is like putting the cart before the horse.

It is not only the State and the people that should interest themselves in the subject of nutrition, but it is incumbent also on the medical and allied professions to take sufficient interest in the matter. In the opinion of Sir McCarrison, "The main burden of ensuring that each member of the community should receive a diet which satisfied his physiological needs must rest on the Government, but there is much that individuals can do and that the medical and allied professions and the teaching profession can do in acquainting themselves with the principles of nutrition, practising them and inculcating them."

He also emphasized the need for nutrition being included in the medical curriculum. On this point, he observed:—

"Nutrition is an integral part of preventive medicine and as such should be given a place in the medical curriculum commensurate with its importance. Only when the medical profession is itself fully instructed can it play its part in the instruction of the public."

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Quarterly Bulletin of the Health Organization of the League of Nations Vol. II No. 1, March 1933.

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Annual Report of the Public Health Commissioner with the Govt. of India, for 1933.

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

Treatment of Migraine.—The migrainous patient has always been a suitable subject for investigation, and treatment has varied in accordance with the results of research. At one time the condition was regarded as a manifestation of allergy, and numerous offending foods were investigated, such as milk, eggs, wheat, fish (especially sea shell-fish) pork, chocolate, nuts, etc. Several authorities have discussed the importance of the

hereditary factor, especially the possible transmission of sensitivity. Ophthalmic surgeons are still divided in their opinion regarding the importance of eyestrain as a factor. Many believe that an attack can be precipitated by eyestrain, while others find that notwithstanding careful correction of refractive errors the patient is not helped. The condition has also been studied in relation to diseases such as epilepsy, paroxysmal tachycardia, pituitary enlargement and other endocrine disturbances, and disorders of the vegetative nervous system. The rarer manifestations of migraine, cerebral and abdominal, have also been reported on and include permanent hemianopia and cerebral oedema.

Some authorities connect migraine of local origin with cervical neuralgia and fibrositic nodules, a condition that responds to massage and ionization. One case of definite hereditary migraine developed severe cervical neuralgia during and for some time after pregnancy. There was no optic neuritis and no definite enlargement of the sella turcica. When the neuralgia ceased the ordinary attacks of migraine returned. There was no evidence that the attacks were of the endocrine or menstrual type.

In a general article on the subject, *Critchley* discusses treatment from various aspects, such as the severity of the attack, the type and position of the headache, and the precipitating factors, if any. In addition to the usual complete neurological examination, he lays stress on auscultation of the skull with a view to the diagnosis of blood-vessel tumours such as aneurysms and angiomas. As regards drug treatment, phenobarbitone, half a grain twice daily, is useful, but it does not suit every one. Where an endocrine factor may be at work, dry thyroid, $\frac{1}{10}$ grain, may be given thrice daily. Tablets of glyceryl trinitrate, B. P., were used at one time, but they are now largely replaced by the barbiturates. When the migraine is of biliary origin, Carlsbad salts followed by a copious draught of hot fluid in the morning, or duodenal intubation using a 30 per cent. solution of magnesium sulphate, may be employed. Menstrual migraine may be treated with ovarian or placental extract.

Sometimes an impending attack can be shortened if measures are taken promptly. When after sleeping too long the patient has a feeling of discomfort followed by headache, he should remain in bed for some time and take a draught containing bromide, acetyl-salicylic acid, or caffeine, singly or combined. For chronic ill-health in the migrainous subject, tonics of the strychnine class are recommended. Attention to diet and change of air

are beneficial, and spa treatment at Harrogate or Llandrindod Wells may be recommended.

The use of ergotamine tartrate is discussed by LENNOX and VON STORCH (Harvard Univ.), who employed this drug in a group of 120 cases. The initial trial resulted in abrupt and complete relief from the headache in 107 of these patients. Nineteen patients used ergotamine for more than a year, and all but one obtained relief each time it was used. In some patients a tendency to more frequent recurrence or the appearance of unpleasant symptoms limits the use of the drug. The best method of administration is by intravenous or subcutaneous injection; by the mouth it is relatively ineffective. The beneficial action is specific in migraine, as headaches from other causes are either not benefited or are made worse. Ergotamine raises the blood-pressure, and care should be exercised in administering it to patients with arterial disease; the possibility of ergotism also must not be overlooked. The usual dose is 0.5 mg. ($\frac{1}{200}$ grain), but for some patients half or even one-third of this dose is sufficient. By the intravenous route relief is experienced in 15-30 minutes; the subcutaneous route requires 45-90 minutes but there is less likelihood of nausea, vomiting or muscle pain. In milder cases oral administration is often sufficient. From two to five tablets of 1 mg. ($\frac{1}{60}$ grain) may be given when the headache begins, followed by one or two at hourly intervals until 9 or 10 mg. has been taken and relief has been obtained. While the drug is invaluable in aborting individual attacks, its use should not take the place of efforts to find the cause of the condition.

Treatment by means of calcium has many supporters. It was introduced by Untersteiner of Salzburg, who found it to be efficacious in epilepsy. For migraine he gives 15 gm. daily of the double lactate of calcium and sodium, combined with small doses of phenobarbitone, amidopyrine, and caffeine, citrate which are gradually decreased and withdrawn as the attacks become fewer.—*The Prescriber*.

Ergotamine Tartrate in the Puerperium.—By M. G. DerBrucke, *Jour. Am. Med. Assoc.* (1935) 105: 867.

Four hundred parturient patients were given ergotamine tartrate hypodermically immediately after delivery of the placenta, and orally for the ensuing three days. A mild tonic contraction of the uterus was maintained for a longer period with 1 cc. of ergotamine tartrate than with a solution of pituitary, as was shown by comparison with the series of 167 patients who received

1 cc. of solution of pituitary hypodermically immediately after the expulsion of the placenta. The average height of the fundus in all these cases on the first day was 15.1 cm. On the other hand, in the present series, wherein 1 cc. of ergotamine tartrate was given, the average height on the first day post partum was 11.8 cm. The continuation of the mildly tonic contraction was maintained during the succeeding three days by oral administration of the oxytocic in small doses. The absence of foul lochia bespeaks the absence of sapremia. It would seem that the decrease in the size of the uterus, undoubtedly at the expense of the cavity (both soil and pathway for the propagation of an infection) are materially reduced, thus lessening at least one possible source of infection. In the present series it was possible, according to the author, to reduce the morbidity to 2.25 per cent.—*Jour. P. I. M. A.*

Calcium-Dextrose Therapy in the Late Toxemias of Pregnancy.—A. A. Landry (*New Orleans Medical and Surgical Journal*, 88:567-772, March, 1936) states that in pregnancy there is "an extraordinary demand" on the calcium reserve of the mother for the needs of the growing foetus. In the late toxemia of pregnancy most investigators find a low blood calcium and it should be remembered that there may be an actual calcium deficiency before the blood calcium becomes reduced, the calcium storage in various organs being depleted first. The blood sugar level is also unbalanced in the late toxemia of pregnancy. Thus in the treatment of these toxemias, the use of calcium and dextrose is indicated. Calcium can be supplied by diet and the administration of calcium salts, but to ensure the proper utilization of calcium, the administration of vitamin D or parathormone is also necessary. In the later months of pregnancy, the author advises that calcium and viosterol (vitamin D) should be given as a prophylactic. In patients showing minor symptoms, such as nervous imbalance, tingling in the hands and arms, feet and legs, and occasional cramps, the administration of calcium and viosterol gives ultimate relief and prevents the development of more serious complications. If mild symptoms of pre-eclamptic toxemia develop, the patient is placed on a diet low in fat and proteins, high in carbohydrates and calcium: a calcium salt (calcium gluconate or dicalcium phosphate) and viosterol (10 to 20 drops twice daily) are given. Sunshine baths are prescribed, and rest in bed if the symptoms are at all severe. As a rule improvement is marked in a week or 10 days. In severe pre-eclamptic cases, and

in cases with convulsions, parathormone is given in 20 unit doses hypodermically, with calcium and glucose given simultaneously. In eclamptic cases the calcium gluconate and dextrose are given intravenously. As soon as the patient can swallow the calcium gluconate is given by mouth with glucose lemonade. In 10 cases, 5 mild and 3 severe pre-eclamptic cases, and 2 cases of eclampsia, this treatment was used with excellent results. Of the 8 pre-eclamptics, all improved under this treatment and 7 were delivered at term; one was never rendered free from albumin, but was delivered of a living child at eight months. Both the eclamptic cases recovered: in one case the child was stillborn: in the other living twins were delivered by Caesarean section.—*Medical Times.*

The Gorden Test for Hodgkin's Disease.—David H. Rosenberg and Leon Bloch, Chicago (*Journal A.M.A.*, April 4, 1936), record their results with the Gordon test in three cases of Hodgkin's disease and in three other lymph nodes used as controls (metastatic adenocarcinoma; aleukemic lymphadenosis; lymphoid hyperplasia). The test was positive in two cases of early Hodgkin's disease and negative in a chronic case of one year's duration. The three abnormal lymph nodes, used as controls, gave negative tests. From the reports in the literature the test has been applied in seventy-seven cases of Hodgkin's disease and has been found positive in fifty-six instances (77.9 per cent). Of 101 controls, consisting of normal lymph nodes and nodes showing carcinoma, sarcoma, lymphosarcoma, "pseudoleukemia," leukemia, tuberculosis, lymphoid hyperplasia and adenitis, the test was negative in ninety-eight cases (97 per cent) the three positive tests having been reported recently by Manson, two of which were cases of tuberculous lymphadenitis and one was of lymphoid hyperplasia.—*North West Medicine.*

Treatment of Pernicious Anemia with Autolyzed Liver Concentrate.—Theodore G. Klumpp, New Haven, Conn. (*Journal A.M.A.*, April 11, 1936), studied the therapeutic potency of of autolyzed liver concentrate-Squibb for a period of two years in the wards and in the hematology clinic of the New Haven Hospital. He found that autolyzed liver concentrate is effective in the initial and maintenance treatment of addisonian anemia. Autolyzed liver concentrate is more potent than liver extract-Lilly derived from the same amounts of liver. In the initial treatment of pernicious anemia, maximal effects have been obtained from a

daily dose of autolyzed liver concentrate derived from between 150 and 200 Gm. of liver. For maintenance treatment a dose of from 1 to 8 teaspoonful daily, on the average 3 teaspoonful have been found adequate.—*North West Medicine*

Aloe Vera Treatment of Roentgen Ulcers and Telangiectasis. Following a personal communication from Dr. Creston Collins in 1934, Carroll S. Wright, Philadelphia (Journal A.M.A., April 18, 1936), began the use of the fresh aloe vera leaf in the treatment of two cases of x-ray telangiectasia resulting from ill advised attempts at x-ray depilation by local advertising concerns, and in one case of radium telangiectasia of ten years' duration. Because of the difficulty of applying the whole leaf directly to the areas in question, he scraped out the intestinal contents of the leaf and mixed it with an equal quantity of aquaphor and had the patient massage this into the skin every night. Since October, 1934, he has treated seven cases of x-ray telangiectasis and the one case of radium telangiectasia by this method. No improvement was obtained as regards the degree of telangiectasia but the texture of the skin was improved in all cases. One could not expect that the telangiectasia resulting from excessive x-ray application would be improved by any method that did not include destruction of the enlarged vessels. The author discusses the remarkable improvement that he obtained in two cases of x-ray ulceration with the hope of stimulating interest in what promises to be a revolutionary method of treatment for early x-ray damage to the skin and ulceration of the skin resulting from x-rays. In view of the unfortunate but nevertheless occasional burns that may result from over-exposure to roentgen rays, any therapeutic agent that offers a hope of quick healing and relief of discomfort in such sequelae is worthy of further study. From the cases reported it would seem that x-ray ulceration, even of several years' duration, will respond to the use of aloe vera. The permanence of results can be determined only by watching cases thus treated over a period of time. Little can be expected in the treatment of telangiectasia as a result of irradiation beyond a smoothing and softening of the affected skin.—*North West Medicine*.

Lymphogranuloma Inguinale.—Lymphogranuloma inguinale was first described by Chassaignac in 1859. Durand, Nicolas and Favre, in 1913, recognised it as an entity. It is definitely a venereal disease, and is transmitted only by direct contact. The

ætiological factor is unknown, but is generally held to be a filter-passer. *Bacillus gangrenæ cutis*, allied to Ducrey's bacillus, has been considered the causative organism. The disease is known by a variety of names, such as "tropical" or "climatic" bubo. One of these names ("non-venereal" bubo) is at variance with the facts. The condition occurs frequently in seamen and is largely a tropical disorder. Diagnosis has to be made from chancroidal bubo, syphilitic adenitis, tuberculosis, Hodgkin's disease, malignant disease, and *pestis minor*. The evolution of the disease is very slow. The tongue, palate and neck have been attacked, but implication of this sort is very rare. In 1925, W. Frei introduced his intradermal inoculation test. Frei's antigen is made by aspirating the contents of a softened bubo which has not formed a fistula. This is diluted with normal saline solution and sterilised on two successive days. It is injected intradermally into the arm. In *lymphogranuloma inguinale* a marked papular reaction occurs in 48 hours. This reaction is not given by chancroid bubo or *granuloma inguinale*. A slight redness may appear in normal cases. However, Frei's test is not accepted by all observers as specific.

J. A. Bourguoin reports three cases and discusses the condition. He points out that manifestations are remittent. The course is protracted and three stages are generally recognised. The local lesion is usually confined to the genitals, but rarely may be extragenital. Next follows chronic inflammatory implications of the adjacent and more remote lymph glands. The third stage exhibits lesions in non-lymphatic tissues, which are directly associated with the destruction of lymphatic glands and vessels. In the male the primary lesion occurs on the *glans penis* or in the balano-preputial sulcus. The time between exposure and the appearance of a primary sore is considered by some observers to be between 10 and 30 days, but the period is difficult to estimate. The lesion is usually small and evanescent; it may be papular, nodular, or ulcerative. A lymphogranulomatous urethritis may develop. After about two weeks the superficial inguinal lymph glands enlarge. Elephantiasis of the penis and scrotum may follow lymphatic obstruction. The adenitis may be unilateral or bilateral. The glands, at first discrete, become matted together. The skin adheres to the underlying glands and becomes red and later violaceous in colour. The external iliac glands become involved. There may be no suppuration, but often areas of softening appear and multiple fistulæ form. Pain is usually absent, but tenderness over the glands occurs. Other manifestations

may be pyrexia, frequent pulse, arthritis, and *erythema multiforme* or *nodosum*. A leucocytosis (up to 20,000) with increase of the large mononuclear cells is of diagnostic importance and implication of the deep iliac glands is deemed to be pathognomonic. The second stage may last for months, the glandular inflammation being replaced by fibrosis. In men the third stage is rare, appearing as rectal stricture. This stricture may be combined with pelvic cellulitis, fistulæ and abscesses, or elephantiasis of the external parts.

In the female the primary sore is at the fourchette or in the vagina. In both sexes the primary sore may escape observation. In the female inguinal adenitis rarely suppurates and the only common manifestations are late, such as stricture of the rectum. Esthiomene (*ulcus vulvæ chronicum elephantiasiticum*) is a chronic ulcer of the genitoanorectal region often attended with pudendal elephantiasis. Bourgouin investigated Frei's test, using, as a control, saline solution with 0.25 per cent. of phenol. He found that it was often necessary to use more than one antigen to obtain a positive reaction. Antigen loses much of its strength after six months. Bourgouin points out that R. Bensaude and A. Lambling insist that the result of Frei's test must not be read before the third or fourth day. The reaction may persist for 10 days or longer. Not every case gives a positive result to the test. Cross-testing may be made. Antigen from a suspected case may be injected into a patient known to have the disease. If the patient gives a positive reaction, the suspected person may be deemed to have the disease. Cases are reported in which a person who did not react to the Wassermann test gave a positive reaction as a result of lymphogranulomatosis, without manifesting any evidence of syphilis. Again, some patients with lymphogranuloma, who have syphilitic lesions as well, fail to react to the Frei test, but give a positive reaction after antiluetic treatment. It is obvious that there are unexplained vagaries in the application of Frei's test which militate against its usefulness.—*Med. Journal of Australia*, Dec. 28, 1935, p. 902.—*Thr' The Med. World*.

The Treatment of Spastic Colon.—Remarking that since the war muco-membranous colitis has become rarer and milder degrees of spasm of the colon more frequent, T. L. Hardy (*British Medical Journal*, March 7, 1936, i, 487) discusses treatment under three main headings. First he places management of the nervous instability present, and second, treatment of the general health. This consists in a suitable apportioning of rest, occupation, and

recreation, planned to suit the degree of fatigue and the mode of life. Third comes treatment of the function of the colon. Constipation, the faulty use of purgatives and the relief of abdominal symptoms are the chief factors requiring attention. All purgatives must be stopped and their place taken by the regular use of lubricants, such as liquid paraffin or simple emulsions of paraffin and agar-agar or better still, by one of the preparations of vegetable mucilage, such as isogel or coreine. Anti-spasmodic and sedative drugs are of great value in local treatment. The following is a useful prescription:

℞		
Tinct. belladonnæ	...	5 minims
Sod. brom.	...	5 grains
Aq. chlorof.	...	$\frac{1}{2}$ ounce

A tablespoonful in water three times daily after meals.

Hyoscyamus is also of value, and may be usefully combined with iron and mercury in the following prescription advocated by Stacey Wilson:

℞		
Liq. ferri perchlor.	...	15 minims
Liq. hydrarg. perchlor.	...	15 minims
Tinct. hyoscyami	...	15 minims
Syr. aurant.	...	60 minims
Aq. chlorof.	...	$\frac{1}{2}$ ounce

A tablespoonful in water three times a day ten minutes before meals.—*The Practitioner*.

Silver powder in Gonorrhœa.—Silver preparations in the treatment of gonorrhœa have been used with success for some time, but according to D. Trenk (*Munchener Medizinische Wochenschrift*, February 14, 1936, lxxxiii, 271) insufflation of powdered silver offers an improvement upon existing methods. He has used a special preparation in the treatment of gonorrhœa in females, applying the powder on to the cervix through a speculum and he claims that the total duration of treatment is reduced to just over nine weeks with powdered silver as compared with his best results before with silver proteinate with an average of over twelve weeks for treatment. Further advantages claimed for the new method are its handiness and the fact that the dry powder does not stain the linen or clothes of the patient or practitioner.—*The Practitioner*.

Artificial Fever Therapy of Gonorrhoeal Arthritis.—Report of Thirty-One Cases.—H. Worley Kendall, Walter W. Webb, and Walter M. Simpson. *Am. J. Surg.* XXIX, 428, 1935.

During the past three years, the outlook for patients with gonorrhoeal arthritis has been enormously improved. This report is based on thirty-one cases in which several forms of treatment were used, including hot baths, cabinets with carbon-filament electric bulbs, electric blankets, diathermy, and radiothermy. The clinical results were essentially similar when the fever could be maintained over a sufficiently long interval. The apparatus used for fever induction and maintenance was for the most part the air-conditioned "Kettering hypertherm". The average set of air conditions to which the patient's body is subjected are: dry-bulb air temperature of 140 to 150 degrees Fahrenheit; relative humidity of 35 to 40 per cent., and air velocity of 425 cubic feet per minute. The elevation of rectal temperature to 105 degrees is usually obtained in forty minutes. During the treatment, two to four liters of sodium chloride solution (0.6 per cent.) is given by mouth to replace the chloride loss.

The *in vitro* thermal death point of fifteen strains of gonococci was determined at different temperature levels. At 102 degrees Fahrenheit, growth was not appreciably affected. At 104 degrees, about 99 per cent. of the organisms were killed by ten hours' exposure. At 105.8 degrees, 99 per cent. were killed by from four to five hours' exposure; the remaining 1 per cent. required from eleven to twenty-three hours. At 106 degrees, 99 per cent. were rendered non-viable in two hours, while the remaining 1 per cent. required five to twenty hours.

During the past four years, the authors have treated 383 patients and have given 2,844 fever treatments without injury to any person. Patients are given four to five treatments of five to seven hours' duration with a therapeutic range of 106 to 106.8 degrees Fahrenheit at intervals of three to five days. In 74 per cent. of the author's cases, the disease was polyarticular. Twenty-three patients had positive smears. Of the eight patients with negative smears, three had acute gonorrhoeal arthritis and five had chronic arthritis. Following the course of treatment, twenty-four patients showed a negative smear. The smears of seven patients were still positive, but in four of these cases the smears became negative in two weeks.

Of the nineteen patients with acute gonorrhoeal arthritis, the average improvement in joint function immediately following the fever treatment was 27.5 per cent.; in three patients, the joint

restoration was complete. Of the twelve patients with chronic gonorrhoeal arthritis, the average improvement at the conclusion of the course was 62.5 per cent. In four cases, joint function was completely restored. At the present time, the average improvement in joint function in the acute cases is 98.5 per cent.; in the chronic cases, 88.3 per cent.—*Paul Siman, M.D., Iowa City, Iowa.*
—J. B. J. S.

Early Diagnosis and treatment of Intestinal Invagination in Nurslings. E. Pouliquen.—*Arch. de med. d. enf.* 38:69 (Feb.) 1935.

The assertion is made that in the absence of a bloody stool, diagnosis at the first visit is not established in one of ten cases. When all the pathognomonic signs of intussusception are present, nothing is easier to identify, and the equation of Ombredanne "signs of occlusion plus discharge of blood per anum equals invagination" becomes axiomatic.

Weeks and Delprat maintained that these phenomena are so significant in a previously healthy baby that the diagnosis may readily be made by telephone and priceless time saved in hurrying the patient to the hospital for operation. Intermittent paroxysms of pain, with vomiting and the characteristic facies, should lead the clinician to search for the typical sausage-shaped abdominal tumor. If rectal palpation brings evidence of a serosanguinolent discharge, the passage of a bloody stool may be anticipated and operation proceeded with at once. Roentgenoscopic examination is also an invaluable agent in arriving at a prompt conclusion.

Several histories of cases illustrating the dangers of delay in meeting this grave clinical emergency are attached.—*A. J. D. C.*

Snake Venom as a Hæmostatic.—The coagulant action of certain snake venoms on blood is well known. This led to the suggestion by Prof. H. Hartridge, F.R.S., that snake venom might be of value in the treatment of hæmophilic hæmorrhage. Macfarlane and Barnett accordingly investigated the action of various venoms on hæmophilic blood. The best results were obtained with the *Vipera russeli*. One drop of a 1 in 1000 solution of the dried venom added to 10 drops of hæmophilic blood produced clotting in 17 seconds, although spontaneous clotting took 35 minutes. Moreover the clot was tough and elastic in contrast to the soft, ineffective clot of hæmophilia. A dilution of 1 in 10,000 or even in 100,000 had a clotting-time sufficient for practical purposes—about 60 seconds. The action

of the powerful toxins in the venom is negligible in the 1 in 1000 solution. By the local application of the 1 in 10,000 solution complete hæmostasis was secured almost immediately in hæmorrhage after tonsillectomy and hæmorrhage in hæmophilics following dental extraction.

At the Odontological Section of the Royal Society of Medicine J. D. Cambrook reported results from this treatment. He pointed out that sterilization of the venom was necessary. As heat destroys the coagulant, sterilization was accomplished by filtration. At first the venom was put up in solution, but this was found to be unstable unless kept in a refrigerator. The difficulty was overcome by evaporating the venom with saline under reduced pressure, so that addition of water gave a 1 in 10,000 in normal saline. Thus a stable sterile product was secured. The action of the venom is so markedly diminishing the coagulation time—not only of hæmophilic but of any blood—is not well understood, but it acts as a form of thrombokinase.

Cambrook has used the venom in over 50 cases of dental hæmorrhage arising from different causes, including several hæmophilics. If there is a history of hæmorrhage he removes teeth under local anæsthesia; as this allows early manipulation of the wound without pain. Block anæsthesia is preferable, as injection near the socket causes some local damage. After the extraction a short squat plug of cotton-wool is soaked in hot venom and used as follows: Pressure is applied to the edges of the socket, so that the plug becomes mushroom shaped and acts as a mechanical obstacle to the flow of blood. The pressure on the plug squeezes out the venom and mixes it with the blood in the socket, so as to form a firm clot. The plug is left in position until it falls out, and if hæmorrhage occurs another plug is substituted.—*The Clinical Journal*.

Differential Diagnosis of Jaundice in Infancy.—*E. Helmreich*, Wien. klin. Wchnschr. 47: 1266 (Oct. 19) 1934.

According to Helmreich, jaundice is not a disease. It is a symptom due either to a disease of the blood or to a disease of the liver. Its chief forms in infancy and their differentiation are as follows:—

(1) Icterus neonatorum (a hemolytic form of jaundice). In this form of the disease bilirubin is absent from the urine and present in the feces; there is an indirect diazoreaction in the serum; the disorder appears from the third to the tenth day, never later; fever is absent, and the general condition is good, except

perhaps for marked somnolence. The disorder affects 80 per cent of all new-born infants and all prematurely born infants. It lasts from ten to fourteen days, continuing somewhat longer in the prematurely born infants. The pathogenesis is only partly clarified by the presence of placental blood in the infant's circulation, which brings the erythrocyte count up to about 6,500,000 and accounts for the intense redness of the skin. By the rapid disintegration of the surplus, hemoglobin is freed and changed into bilirubin; hence the increased osmotic resistance of the new-born and the jaundice. No treatment is required.

(2) Icterus gravis (hepatic form of jaundice). In this form of the disease bilirubin is present in the urine and feces; the disorder appears on the first day of life; fever appears in the last stage; the general condition is bad; there are symptoms of a cholemic nature—lack of appetite, prostration or hypersensitivity and loud screaming, and apnea (meningitis irritation); catarrhal diarrhea and/or other types of mucosal catarrh occur; there are bleeding from the navel and from the skin, hematemesis and bloody stools (hemorrhagic diathesis) and consequently, anemia; the liver and the spleen are enlarged, and there is terminal ascites; the issue is practically always fatal within a few days. Icterus gravis sometimes affects every child of the same parents (habitual jaundice), although the parents and their ancestors have never had jaundice and the children of their offspring who survive are exempt. All therapy is futile. Blood transfusions are contra-indicated.

(3) Septic icterus (hepatic form of jaundice). In this form of the disease bilirubin is present in the urine and feces; the disorder appears any time after birth, under high fever, in the presence of an infectious disease, such as infection of the navel, pneumonia, pyelitis or an intestinal disease. The liver is swollen. The general condition is bad. The therapy and its success depend on the infectious process.

(4) Icterus due to congenital atresia of the bile ducts. In this form of jaundice bilirubin is present in the urine and absent in the feces; the disorder appears usually in the first days of life, but sometimes only after several weeks; fever is absent, and the general condition is good for an amazingly long time, but the issue is always fatal before the end of the first year, owing to cholemic intoxication and hemorrhagic diathesis. An operation may be attempted in the cases in which the stools are not entirely acholic, showing that the biliary ducts are not entirely closed, but thus far no such intervention has ever been successful. The children and their parents usually show other malformations.

(5) Icterus due to congenital syphilis. In this form of the disease bilirubin is present in the urine and sometimes also in the feces; the disorder appears any time after the third day of life; fever may be absent or present, and the general condition bad. The differentiation from jaundice due to atresia of the bile ducts is possible only by the positive Wassermann reaction, and an energetic antisyphilitic treatment has some chances of success, even if the stools are entirely acholic, owing to obstruction or compression of the bile ducts by gummas at the portal vein or at the bile ducts themselves.

(6) Carotenemia. Carotenemia is not jaundice. It is only a discoloration of the skin due to the presence of an excess of carotene in the blood from the food. It affects large infants and especially those who are well taken care of. The yellow coloration spares the scleras and affects especially the palms, the soles and the nasolabial folds. The chief sources of carotene are butter, eggs and vegetables, especially carrots and tomatoes, but also the green vegetables. It is related to vitamin A, the factor of growth, and hence is important for the development of the child.

Helmreich gives the following table differentiating the various types of icterus.

	Bile Pigment in Urine	Bile Pigment in Stool	Onset of Icterus	Fever Usually after Third day	Condition First days of Life
Icterus neonatorum ...	Minus	Plus	From 3 to 10 days	0	Good
Icterus gravis ...	Plus	Plus	From first day	Terminal stages	Very bad
Septic icterus ...	Plus	Plus	Uncertain	Plus	Bad
Syphilitic icterus ...	Plus	Plus or Minus	Usually after third day	0 or plus	Bad
Icterus due to congeni- tal Plus atresia ...	Plus	Minus	First days of life	0	Not bad at the onset, but bad later on

Abt, Chicago,—A. J. D. C.

Treatment of Fibrositis—By W. S. C. Copeman, M.A., M.D., M.R.C.P.—Fibrositis is a general term for a condition of pain, stiffness, and limitation of movement which may occur almost anywhere in the body. It may be defined as being a condition in which inflammatory changes involve the subcutaneous tissues the superficial or deep fascia of the body, the muscle sheaths and

tendons, the fibrous portions of the joint capsules and ligaments, the bursae, or the fibrous sheaths of the larger nerves. It may therefore be subdivided into three types according to the nature of the structures primarily attacked:

- (1) Panniculitis: inflammation of the subcutaneous tissues and fat.
- (2) Myositis: inflammation of the superficial and deep fascia and muscle sheaths and tendons.
- (3) Neuritis; inflammation affecting primarily the fibrous sheaths of nerves.

The clinical manifestations vary according to the area of the body and the type of fibrous tissue involved. The predominant effect, for instance, of involvement of the muscles of the neck will often be headache; of those of the limbs, numbness and tingling; and of the fibrous tissue surrounding joints, stiffness and pain on moving these joints, which is often wrongly attributed to true arthritis. The local effect of such inflammation upon the affected muscles will be to keep them in a state of spasm during the acute period. Subsequently the spasm will relax, but localized patches of nodular induration will be felt lying in the muscles. Occasionally, also, thin fibrous cords will be felt running through the subcutaneous tissues. These "nodules" will generally, but not invariably, prove tender on palpation.

The victims of fibrositis will usually be found to have some degree of defective skin circulation, as evidenced by abnormal sensitivity to cold weather or to local draughts, spontaneous bruising, or the fact that they perspire in the hottest weather only with difficulty. Attacks of fibrositis will occur in many people without apparent detriment to their general health, and in such persons the suspicion must arise that the cause may not be primarily an infective one.

Foci of infection.—The general principle to be adopted in the presence of any case in which the symptoms do not call for urgent treatment will be an endeavour to establish the aetiology of the attacks.

A large group of cases can be traced to the presence of focal infection, and both the teeth and the tonsils are generally suspect. This is perhaps more particularly so in cases in which the upper part of the body or the arms are chiefly affected. It must be remembered in this connexion that negative X-ray evidence of apical infection of the teeth must never be accepted as conclusive evidence that this does not exist, since changes

which can be demonstrated by this means are necessarily of a chronic and advanced nature. Occasionally an abdominal focus of infection will be found, although with regard to the bacteriology of the faeces Pemberton's aphorism must be borne in mind when the question of vaccine treatment is considered—"It is a poor bowel which doesn't grow something". Another focus of infection, which is sometimes overlooked, is the prostate, and in the absence of other infection it is worth while to perform prostatic massage and culture the "bead" so obtained.

A further group of cases would appear not to be of a primarily infective nature but to be allied to gout or to a special sensitivity to certain types of food. Such cases may be suspected by their excellent general health even during attacks, the periodic or seasonal nature of their attacks, a history of familial gout or of being "unable to digest" certain foods or drinks, and finally by the fact that their fibrositis tends to prefer the lower limbs and portions of the body. Such patients, in addition, often show the symptom-complex described by the French as "hepatisme". This is shown principally by a morning headache, furred tongue, and a tendency to incomplete bowel emptying with light-coloured and offensive stools; often, too, there is slight tenderness on palpation in the neighbourhood of the liver. For this group of patients the treatment will be on the usual lines for gout, with special attention to the bowels and elimination of any food which the patient can be shown to be sensitive.

Finally, a certain proportion of cases of fibrositis can be traced to chronic strain often secondary of faulty posture. A common example of this will be found in those cases in which the fascia lata of the thigh is tender and painful in conjunction with a flattened plantar arch. Such patients are usually cured when the distribution of the body weight is readjusted by raising the inner edges of the shoes. Some cases of low backache seem also to be attributable to the same cause.

The specific treatment of the condition of fibrositis will fall into several categories, success being generally the resultant of a wise selection of remedies, according to the type of case, rather than the vigorous application of one remedy only.

Drug Therapy.—In the acute stage rest in bed is desirable, and internally analgesic measures are primarily indicated. Aspirin or calcium acetylsalicylate (5 to 15 grains) are the most efficient drugs for this purpose in the majority of cases. If necessary potassium iodide (2 to 5 grains) may be added, as may phenacetin (5 to 10 grains) or caffeine (5 grains) at four-hourly intervals.

A useful proprietary product which in addition to aspirin and phenacetin contains codeine phosphate $1/6$ grain is tab. veganin. Alternatively, Dover's powder (5 to 15 grains) may be combined with aspirin, but is rather constipating. Pyramidon (3 to 10 grains), which may conveniently be given in the form of novalgin, is a centrally acting drug, and will sometimes be effective where the salicylate group fails. Externally an ointment designed to act either as a rubefacient or as a counter-irritant should also be ordered. Ung. methyl salicyl. smells rather strongly but is efficient, whilst in the form of Bengue's balsam capsicum is added. A hot linseed poultice containing opium will often give considerable relief if applied every few hours, as may a hot cloth wrung out in a solution of ordinary mustard in water. Massage is undesirable in the acute stage.

In addition to analgesic drugs a mercurial purgative such as calomel ($1/2$ to 2 grains) should be given at the outset of the attack and followed next morning by a strong dose of Epsom or Glauber salts in hot water. In certain cases benefit will result from a short course of colonic lavage twice a week for two to three weeks. Where it is desired to immobilize the muscles of the back during the acute stage, the most usual effective method is by means of a perforated belladonna plaster. This must, however, always cross the mid-line behind and come round to the front in order to achieve a maximum effect. Ordinary wide strapping plaster is quite a good substitute, but elastoplast is not so suitable except in the case of the shoulder.

Heat and Massage.—When the condition is less acute and the patient is able to get up, the application of both heat and massage to the affected regions is indicated. Heat may be applied in a dry or a moist form; the one often succeeding where the other has failed. Dry heat may be given by means of a portable lamp, an electric heating pad, exposure to a gas-fire (which gives out infra-red rays), the application of a hot iron through brown paper applied to the skin, a hot-water bottle, or a bag of salt or sand which has been heated thoroughly in the oven.

Moist heat may be applied as kaolin, bread, or linseed poultices, which are possibly more efficacious although less easy to prepare than antiphlogistine; mud packs such as can be prepared from the dried cubes of foreign spa mud, which can now be bought with full instructions: applications of hot paraffin wax of a special melting-point, which is sold for this purpose; or, if the patient is in a condition to do so, as a general sweating

exposure in a Turkish bath. If the latter be ordered, however, the patient should be instructed to drink fluids copiously before, during, and after his treatment, as otherwise the temporary concentration of the blood is likely to provoke a further acute attack. Finally, perhaps the simplest method is to order an ordinary bath to which 4lb. of Epsom salts (or common salt) have been added. This should be taken as hot as possible, and contrary to the general belief, the patient should not "soak in it" but should get out after only five to ten minutes' immersion. He should then be briskly rubbed down, some ointment being rubbed rapidly into the affected areas, and be wrapped in a blanket and put to bed for several hours. After this, if deep massage be available for the affected areas it will generally prove effective after a few treatments, although it is painful at first. For robust patients, a variation of considerable value will be the addition of "transkutan" to the thermal bath once or twice a week.

Hydrotherapy and Counter-irritation.—Where the patient lives near a spa or an institution equipped for hydrotherapy, "Vichy" douche massage followed by "contrast douching" (alternate hot and cold water directed on to the painful areas under pressure from a hose-pipe) is probably the best follow-up treatment, and stimulates the skin to resume its normal function.

In certain cases, more particularly when the complaint is of lumbago, counter-irritation will also prove of great value. This may be applied by heating an ordinary platinum loop, such as is used for bacteriological purposes, to a white heat by the bedside and applying it to the skin over the affected muscles in twelve to fourteen places. A small blister should result from each application, and the whole area may then be covered over with a gauze dressing. An electric cautery will do the same thing more efficiently. Another method is to produce blisters by means of "blistering fluid" or cantharides plasters, but these do not seem to be of equal value to the actual cautery. Dry-cupping is a somewhat obsolete method of treatment, but is occasionally effective, as is full exposure to a mercury vapour lamp at a distance of eighteen to twenty-four inches.

In the chronic phase massage is essential if the attack is to be terminated in the minimum time and if recurrence is to be avoided. To be effective, the indurated areas (nodules) must be carefully sought out in the muscles, and the massage must be very deep at these points. It will be found that after deep kneading

with the finger-tips or thumbs they will, after an initial period when they may become increasingly painful, gradually become insensible to palpation, and ultimately disappear. This process will be considerably facilitated if it be preceded on each occasion by twenty to thirty minutes' application of heat in one of the forms mentioned above. In certain cases a "nodule" will prove to be too painful for this type of treatment, which will then induce protective spasm in the surrounding muscles, and so render further "kneading" impossible. In such cases a dose of aspirin or other analgesic may usefully be given prior to beginning the treatment.

Where one or more discrete nodules can be felt, and when the pain is found to be chiefly localized in these sites, the effect of injecting a few cubic centimetres of local anæsthetic, such as navocain or "A.B.A." compound, into them is sometimes dramatic. This treatment is not, however, of much use in the presence of more diffuse pain or tenderness.

Diet and After-care.—In obese patients it is wise to prescribe a weight-reducing diet. The chief foods to avoid will be the starches and carbohydrates, from which they derive the majority of their calories. Bread, potatoes, and pastry can well be eliminated, and substituted by rye-vita, diabetic bread, or bran biscuits for a time. A day or two of complete starvation—except for fluids, which should be taken copiously—will, if submitted to by the patient at the outset of an attack, often cut it short. In obstinate cases the addition of a small regular dose of thyroid extract (1/4 to 1/2 grain) twice a day before meals will be of value.

In cases in which the origin is suspected to be gouty, one or two intramuscular injections of an ampoule of atophanyl at an interval of several days may be of help, while one of the hexamine preparations such as "piperazine", "urodinal" or "uralysol" (one teaspoonful in half a glass of water before breakfast) should be ordered in addition for some weeks.

Subsequent to an attack of fibrositis, it is important that the patient should be taught to contract the affected muscles daily by means of appropriate exercises. He should also make a point of obtaining some regular exercise in the open air, even at the cost of rising somewhat earlier in order to walk part of the way to the office. The obese subject must not be allowed to regain his lost weight once the attack recedes; nor should the question of the localization of attacks, as the result of the occupation or hobbies of those predisposed to suffer, escape the notice of the medical attendant.

The prognosis in fibrositis is good if sufficient care be taken and if the value of external as well as internal remedies is remembered. An exception to this is, however, to be found in the case of very old patients, since the senile form of fibrositis will sometimes be found intractable to all the usual remedies.—
The British Medical Journal.

PROCEEDINGS OF ASSOCIATIONS, SOCIETIES, ETC.

The Trichinopoly District Medical Association. (Registered)

A monthly meeting of the above Association was held at 5 P.M., on Saturday the 27th June '36 in the E. R. High School, Teppakulam, Trichinopoly when about 25 members were present. Dr. R. Srinivasan, of Kulitalai was 'At Home' to the members and Capt. Sangam Lal, I.M.S., F.R.C.S., District Medical Officer, Trichinopoly, presided.

After the demonstration of a few X-Ray films and discussion of interesting cases, Dr. R. Kalamegham delivered a lecture on 'Diphtheria'. Half a dozen members took part in the discussion that followed.

With a vote of thanks to the Chair, Host, and Lecturer of the evening the meeting terminated.

The East Godavari District Medical Association, Cocanada.

Minutes of the meeting held at Amalapur on the 30th May 1936.

A meeting of the East Godavari District Medical Association took place at Amalapur on 30-5-1936. 31 members attended the meeting. After an enjoyable tea the proceedings of the meeting commenced with Captain J. S. McMillan, I.M.S. in the chair. Dr. A. Umapathi Mudaliar of Amalapur exhibited a very interesting case of Pulmonary stenosis in a boy, aged 12. A case of congenital syphilis in a child of 2 presenting bony prominences in the skull and another case of malignant growth in neck, probably Lymphadenoma, with pushing forward of the posterior wall of the pharynx and protrusion of one eye-ball were also exhibited. Dr. N. S. Reddi of Amalapur read a paper on Typhoid fever, and Dr. A. Periasastry of Amalapur one on Tetanus. There was a dinner after which the guests dispersed.

The Tinnevely District Medical Association, Palamcottah.

(Affiliated to the Indian Medical Association)

The Tinnevely District Medical Association held its monthly meeting on Saturday the 27th June 1936, at Papanasam (Ananda Vilas) one of the most sacred places of the District, noted for wild scenery. Members numbering 43 including 2 lady doctors gathered from all parts of the District. All the members had an early bath at the Falls and had light refreshments.

The meeting began at 10 A.M. under the Presidentship of Lieut. Col., T. S. Shastry, I.M.S. The Secretary read the minutes of the monthly meeting held at the Head Quarters (Palamcottah) on 23rd May 1936, which were passed. Then Dr. Rama Rao's Bill on College of Physicians and Surgeons was taken up. The following resolution was passed unanimously:—

"The Tinnevely District Medical Association considers that no useful purpose will be served by the institution of a College of Physicians and Surgeons."

The draft rules of the Tamil Districts' Medical Federation was read by the Secretary and after discussion the following resolution was passed unanimously:—

"The Tinnevely District Medical Association approves of the idea and supports the organising of the Tamil Districts' Medical Federation."

Interesting case notes by Dr. P. Janardhana Rao, L.M. & S., on (1) Typhoid Fever complicated by cerebral and respiratory symptoms and aphasia, (2) Stabwound of chestwall with protrusion of omentum, (3) Early case of Leprosy with cracks and Keratosis of tips of fingers and toes were read. Colonel Shastry read case notes on a case of Myxoedema. There was a lively discussion on these cases. Dr. K. Padmanabha Ayyar, L.M.P., of Tenkasi, read an interesting paper on constipation. After discussion, Lieut. Col., T. S. Shrastry, I.M.S., summed up the salient and important features of all the cases. Dr. Swaminatha Sastry, L.M. & S., of Trichinopoly and Prof. Nilakanta Sastry of the Madras University were present on the occasion and M. R. Ry. M. D. T. Kumaraswamy Mudaliar Avl., the President, District Board, Tinnevely, joined us about the end of the meeting.

After a hearty vote of thanks to Dr. P. Janardhana Rao, L.M. & S., and his co-workers the meeting dispersed, and all had an excellent dinner at 1 P.M. Thereafter enjoyable music at 3 P.M. by M. R. Ry. Venkateswara Ayyar Avl., B.A. B.L., Vakil of Ambasamudram brought the happy gathering to a close.

At 6 P.M. a Health Exhibition was arranged at the Thirtha-pathy High School, Ambasamudram, which was opened by M.R.Ry. M. D. T. Kumaraswamy Mudaliar Avl., President, District Board, Tinnevely. Colonel Shastri, presided and welcomed the large gathering and explained the need for a campaign on nutrition and diet, pointed out the serious defects in our dietary and pleaded for immediate reform as the first step in the prevention of disease. The President, District Board, expressed in a short speech that such exhibitions are very useful and beneficial to the masses. The exhibits consisted of posters relating to cholera, tuberculosis, malaria, small-pox, etc., and a lecture on tuberculosis was delivered in Tamil by Dr. N. Lakshmanan, L.M.P. This was very much appreciated by the gathering which consisted mostly of citizens and school boys.

BOOK REVIEWS

A Handbook of Tropical Therapeutics. By R. N. Chopra, C.I.E., K.H.P., M.A., M.D. (Cantab), M.R.C.P. (Lond), Brevet-Colonel, Indian Medical Service. 1936. Pp. 1748. [Art Press 20, British Indian Street, Calcutta. Price Rs. 25.]

No one is more fitted to write a book on Tropical Therapeutics than Col. Chopra, who, for over a quarter of a century has devoted his whole life to pharmacological work in the Calcutta School of Tropical Medicine and whose work has earned for him an international reputation. All the experience thus gained, together with its practical application to diseases and their treatment in the well equipped Research Hospital such as the Carmichael Hospital for Tropical Diseases has made it possible for Col. Chopra to bring out such a monumental work.

The book consists of six parts. Part I deals with general considerations in Therapeutics and includes chapters on the action of drugs, conditions modifying drug action, modes of administration and details of technique, chemotherapy, physiotherapy, diet and dietetics in the tropics, treatment of pain and insomnia and the use of tonics. Part II deals with the treatment of helminthic diseases; this section is based on a book on this subject written by the author in conjunction with Dr. Asa. C. Chandler. Part III deals with remedies used against Protozoal diseases and is composed of four sections. The first section deals with remedies used against amœbiasis, the second against leishmaniasis, and trypanosomiasis, the third against malaria and the fourth against spirochaetal diseases. This is

perhaps the most important section from the point of view of the tropical practitioner and the author has brought it up-to-date. Part IV discusses the treatment of bacterial and virus diseases and on the uses of Sera, vaccines and bacteriophage. Part V deals with the treatment of nutritional disorders such as beri-beri, epidemic dropsy, pellagra and metabolic disorders such as obesity and diabetes mellitus. Special chapters have been devoted to the treatment of snake-bites and drug addiction. On this last subject the author has done a lot of research and his opinion will therefore be very valuable. Part VI deals with the treatment of skin diseases. The next section is a dictionary of diagnosis and treatment of the conditions met with in the tropics which cannot be strictly grouped under the heading of tropical diseases. The last part of the book consists of the appendices. Appendix I contains up-to-date information on such subjects as climate and diet in the tropics, X-Ray therapy, non-specific protein therapy; sex hormones in practice and chemotherapy. These are mostly abstracts from journals. Appendix II consists of Tables such as table of bacteria pathogenic to man, of Indian scorpions, of food values, of balanced diets, of posological tables of prescriptions, of anæmias, of obstetric tables, and of Notifiable diseases.

Col. Chopra very modestly says that the book might have many shortcomings and blemishes. But we find none. On the other hand, he has successfully produced a book that will be used as a standard text book of Tropical therapeutics not only in India but throughout the world. The practitioner in India will also find in it a very valuable handbook of general medicine giving in its eighteen hundred pages all that will be valuable and useful to him. The price may appear at first sight to be a little high but considering the mine of information inside the book, it is certainly very reasonable. Col. Chopra can look upon this book with satisfaction as the crowning success of his life work.

The Medical Annual 1936. By various contributors Edited by H. Letheby Tidy, D.M. (Oxon), F.R.C.P. and A. Rendle Short, M.D., B.Sc., F.R.C.S. 1936. Fifty Fourth year Pp. 845. Illustrated. [John. Wright & Sons Ltd. Bristol: Indian publishers are Messrs. Butterworth & Co. (India) Ltd., Calcutta]. Price Rs. 15.

The Medical Annual has all these years been the most popular year book. The 1936 edition maintains the same standard of excellence as its predecessors. It contains much new and important material.

The article on Drug addiction is very well written. In the section on Amœbiasis the value of carbarsone is reported. Under Anæsthesia are discussed cyclopropane, vinethane, supersaturated ether, rectidon and evipan. The very important subject of Anxiety and Depressive States is also thoroughly treated. The chapters on blood diseases are very exhaustive. Sampson Handley's treatment of diseases of the breast is masterly. The section on chemical warfare is bound to be interesting to us today. In the chapter on diabetes mention is made of the high carbohydrate diet, the value of laevo-rotatory sugars, Insulin allergy, Insulin resistance and on the value of duodenal extracts. Dietetic deficiencies and susceptibility to Infection and athletics and training dietetics are included in the section on Dietetics. The sections on gastric and duodenal ulcers by the two editors are very well written. The results of medical and surgical treatment, the histidine treatment of peptic ulcers, the value of gastro-jejunostomy, pyloroplasty, partial gastrectomy are all discussed. The subject of lymphogranuloma Inguinale has been well discussed and is bound to be of use to us in view of the controversies over this subject, in the pages of some of our contemporaries. Sir Leonard Rogers writes on Malaria and discusses the value of Atebrin and Atebrin musonate. The new subject of manipulative surgery has been well written by Sir Morton Smart and is bound to be very useful as an eye-opener to the general practitioners. The Pituitary body and its disorders are dealt with in great detail. The section on Post-operative complications and their treatment, and that on School medical service are also very well written. Radiology which is proving increasingly useful in cardiology and antenatal examination, and thyroid surgery are also well dealt with.

These are a few of the interesting pieces of information taken from the book. The practitioner's index of the new pharmaceutical and dietetic preparations, medical and surgical appliances, the list of the books of the year, a list of medical institutions, homes and spas in England and an official and trade directory, an exhaustive index, good illustrations and a very good get up—all these add to make the 1936 Medical Annual an indispensable companion and guide.

PREPARATIONS AND INVENTIONS

Acriflavine, Euflavine and Gonacrine.—Pharmaceutical specialities of May and Baker Ltd. Dagenham, London. Distributors in India, May and Baker (India) Ltd., 11, Clive St., Calcutta. Acriflavine and Euflavine belong to the class of dyes known as acridines, whose trypanocidal properties were first discovered by Ehrlich through his studies on trypanosome infections.

For the treatment of gonorrhœa affecting the anterior urethra, a solution of Acriflavine 1-1,000 in physiological saline is

employed. About 4 to 8 c.c. of the solution is injected into the anterior urethra twice daily until the discharge is free from organisms, followed thereafter by one injection daily. The Acriflavine solution is retained within the urethra for five to ten minutes after each injection. Should a relapse occur, treatment on the same lines is resumed after an interval of about a week. Two or three injections are frequently sufficient to render the discharge practically free from organisms. For irrigation with relatively large volumes of solution it is best to commence with a concentration of Acriflavine of 1-6,000 to 1-8,000, working up as treatment progresses to a concentration of 1-4,000 as a maximum. The solutions should be made isotonic by the addition of sodium chloride. Irrigation should be commenced as early as possible except in rare cases of acute inflammation. Treatment should in all cases be controlled microscopically.

Treatment of gonorrhœa by intravenous injection of Acriflavine has also been fairly extensively employed, with strikingly good results in many cases. The method consists in giving a series of injections of Acriflavine. These are given three times weekly, each injection consisting of 5 c.c. of a 2 per cent. aqueous solution of the antiseptic. On an average about fifteen injections are given, although in obstinate cases double this number may be necessary.

Euflavine is similar in appearance and solubility to Acriflavine, but being more basic, is less irritant to mucous tissues and more suitable for intravenous use.

Gonacrine, neutral acriflavine is basic in action and does not exercise any irritant effect upon the mucous membranes. It is therefore most suitable for oral administration and may be given to male or female patients.

Gonacrine, when taken immediately following exposure to gonorrhœal infection, has shown itself capable of aborting the attack. It has also a powerful action as a prophylactic. When the infection is of longer duration, larger doses may need to be given and more prolonged treatment is required.

Gonacrine is specially recommended in certain gonorrhœal complications such as cystitis, pyelonephritis and in urethritis.

The dosage recommended is one to three tablets (each grain $\frac{1}{2}$) 3 times daily. The dosage and duration of treatment must in every case be governed by the progress of the patient.

Injected intravenously, Gonacrine has given gratifying results in the treatment of gonorrhœa and its complications, such as septicæmia, arthritis and epididymitis. In the case of women it is especially valuable in securing disinfection of the genital tract.

Cantan and Prontosil.—Manufactured by Messrs, Bayer, Ltd. and distributed in India, by Messrs. Haverro Trading Co., Ltd., P. B., 642, Bombay. "Bayer" Laboratories have now put on

the market a preparation of vitamin 'C' under the name of 'Cantan'. It is a colourless, crystalline substance, easily soluble in water. It is available in the form of tablets for oral administration, each tablet containing 25 mg. of the substance. For parenteral treatment, it is available in ampoules of 1 c.c. and 2 c.c. containing 25 and 100 mg. respectively of the substance.

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'Prontosil'.—Progress of chemotherapy has so far been confined exclusively to protozoal affections. Such a procedure in bacterial infections has so far been a pious wish only. In 'Prontosil' issued from "Bayer" laboratories, such a possibility has begun to be realised. On the strength of hitherto published clinical results 'Prontosil' seems to be a specific in various streptococcal affections such as erysipelas, tonsillitis, carbuncles, puerperal sepsis, etc.

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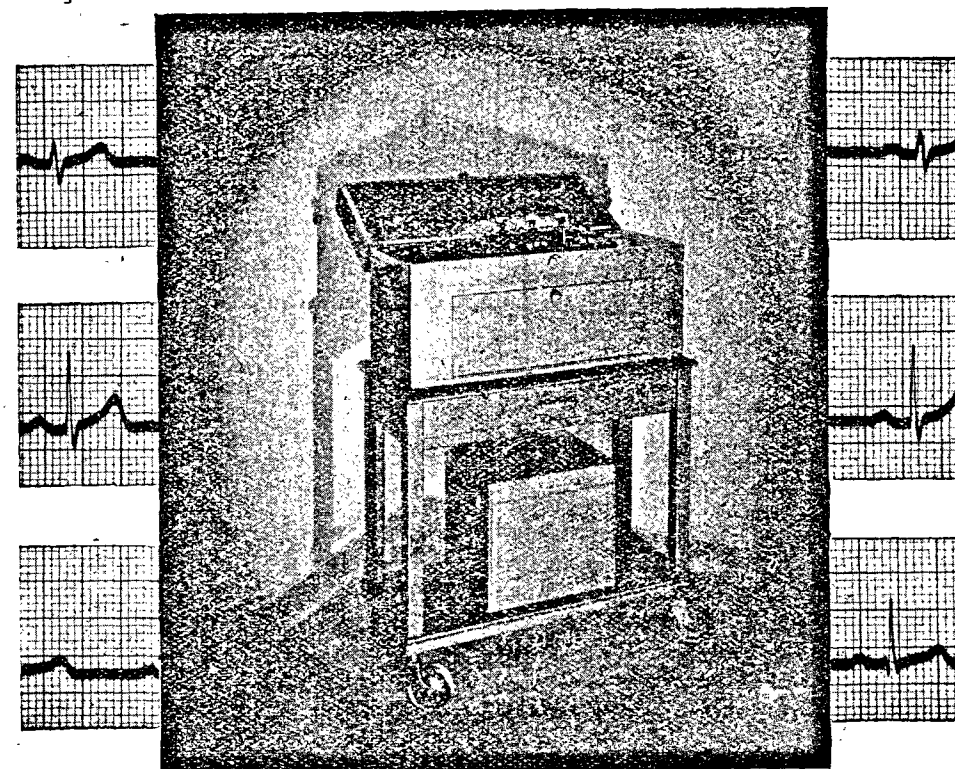
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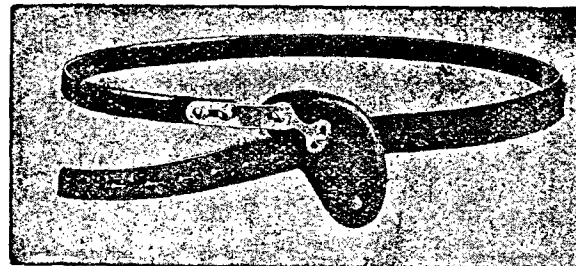
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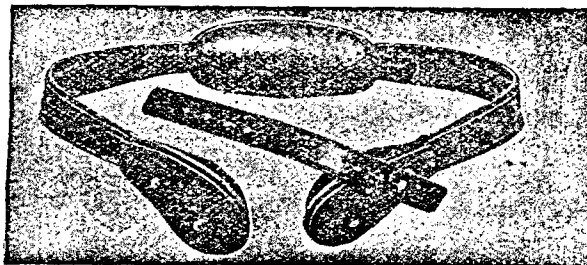
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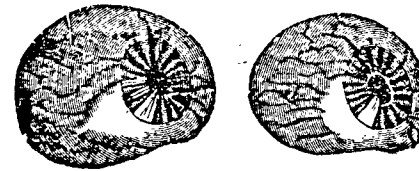
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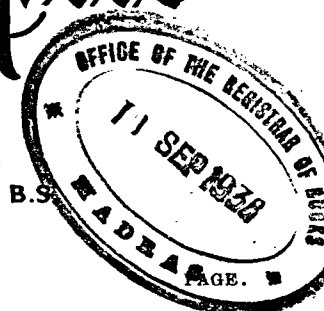
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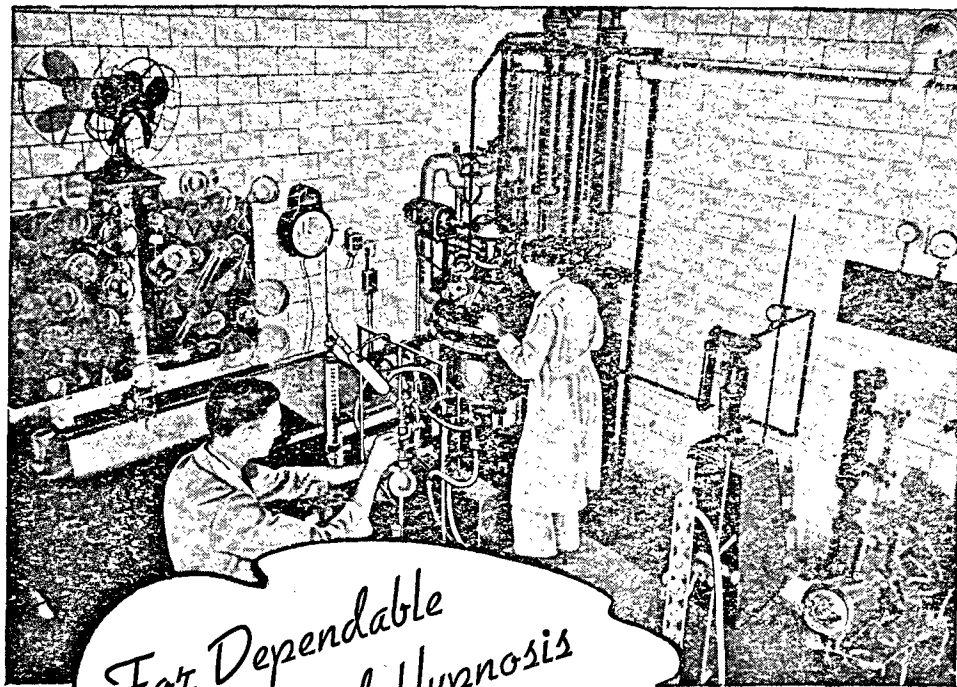
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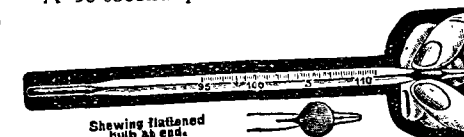
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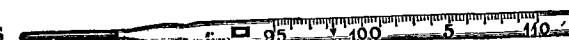
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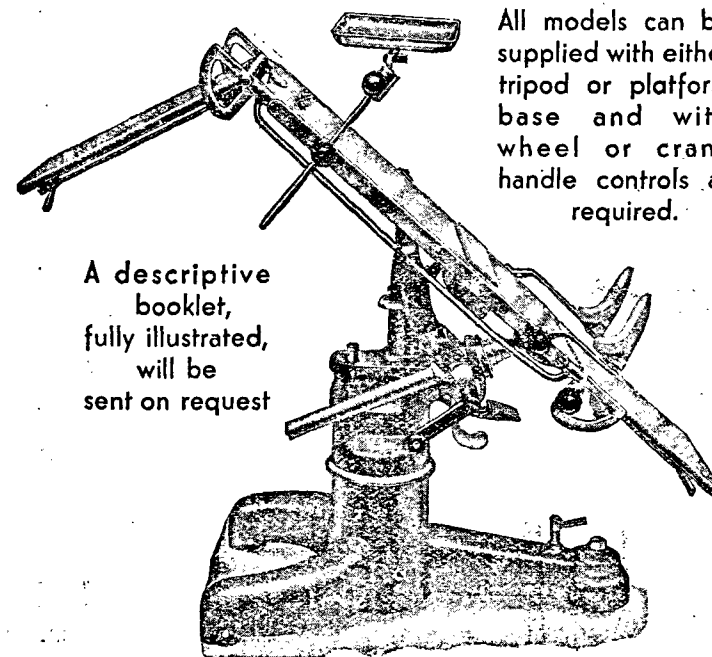
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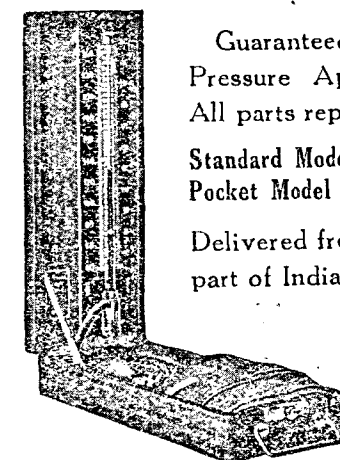
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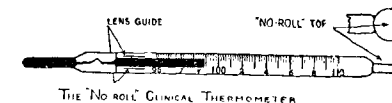


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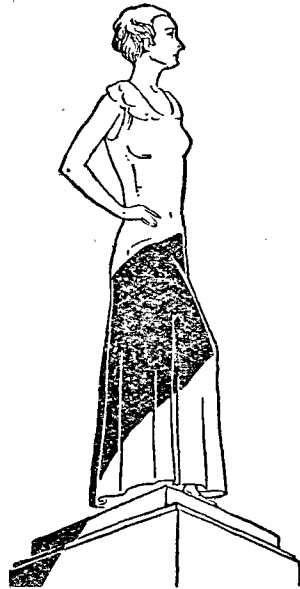


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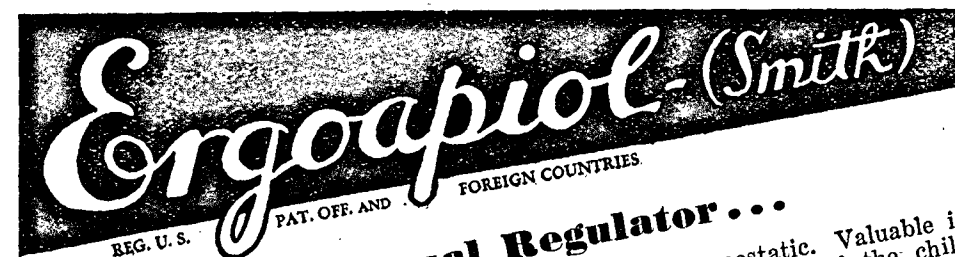
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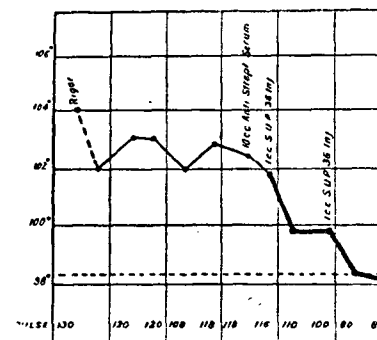


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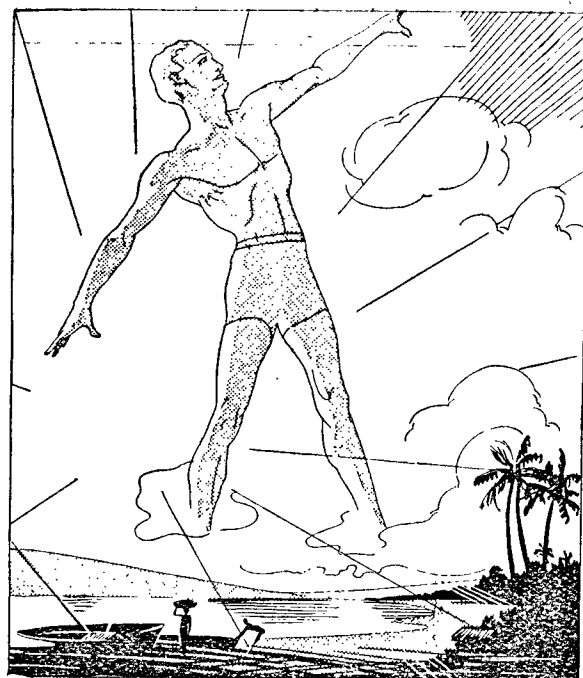
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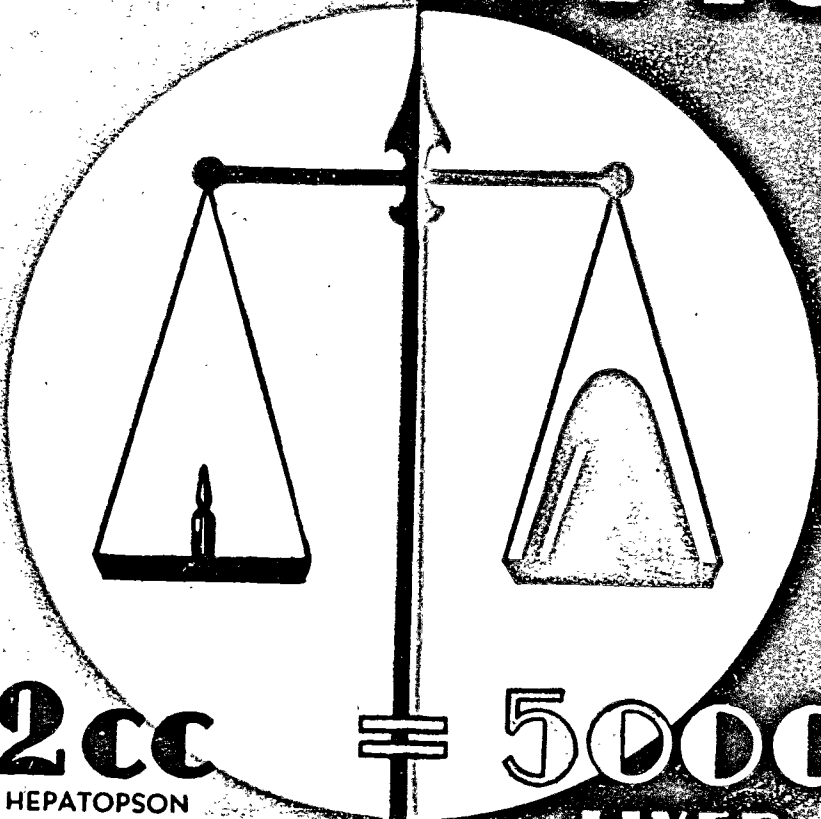
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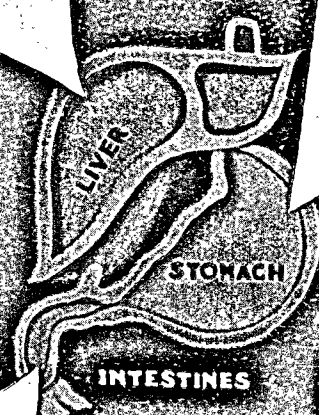
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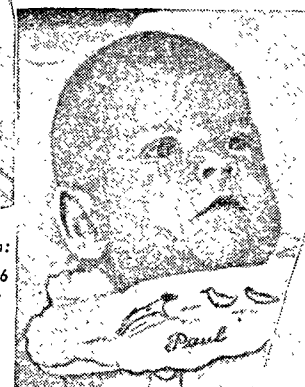
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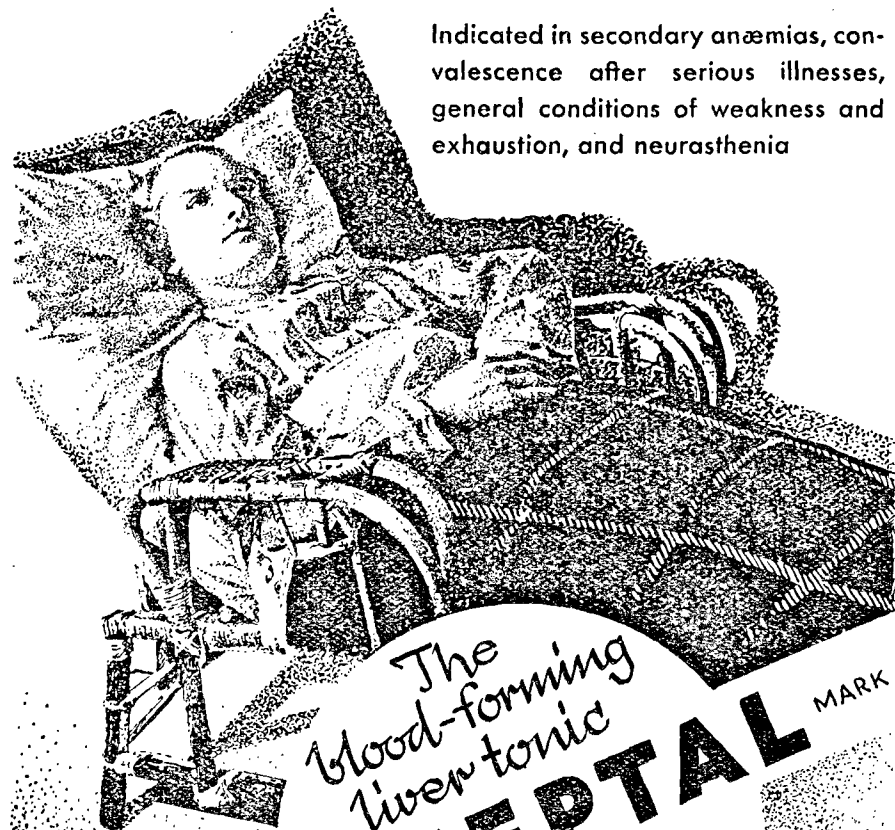
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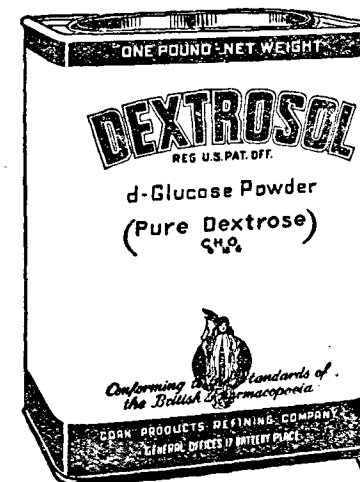
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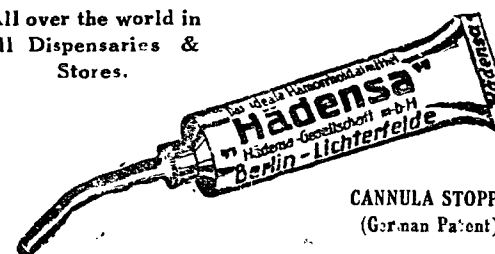
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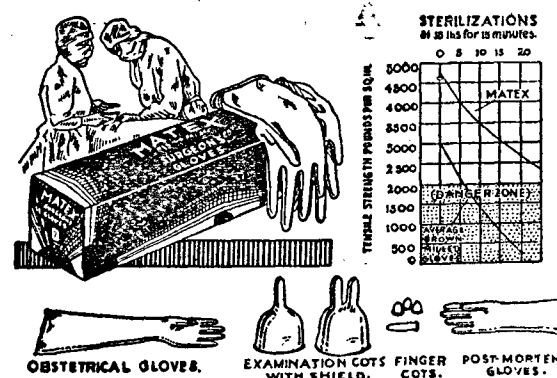
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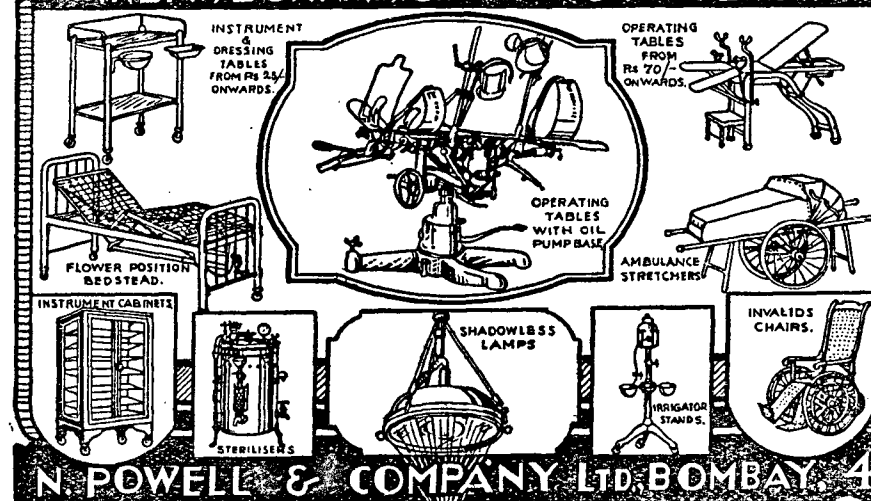
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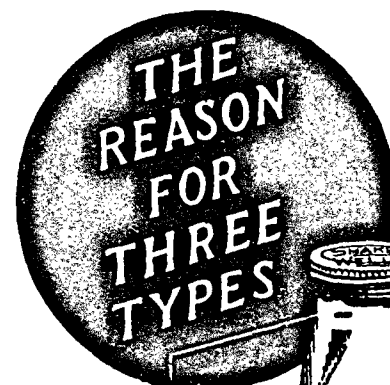
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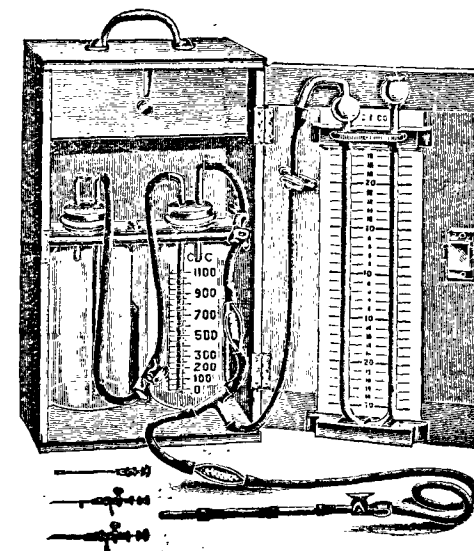
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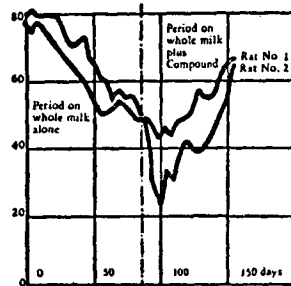
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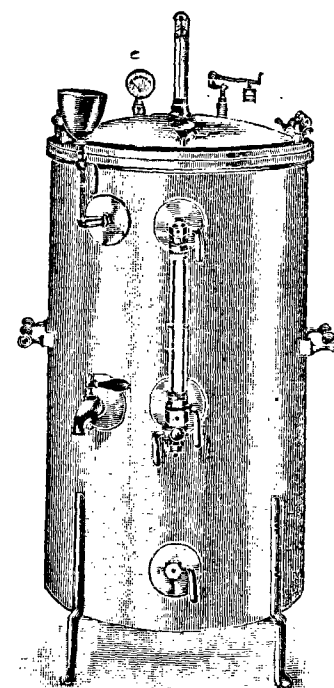
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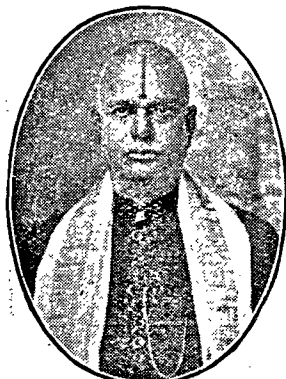
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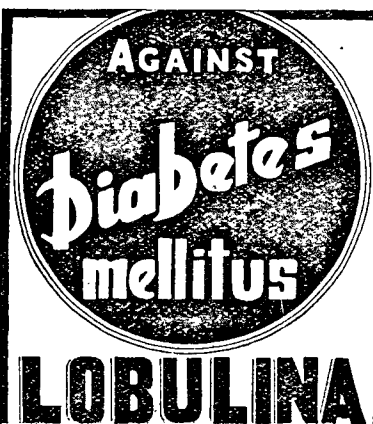
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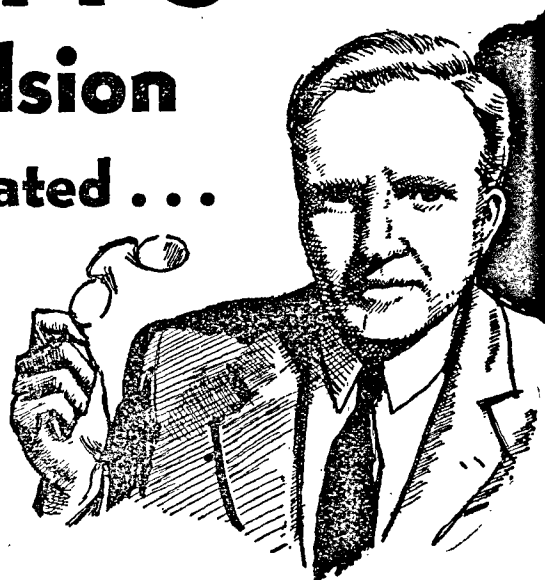
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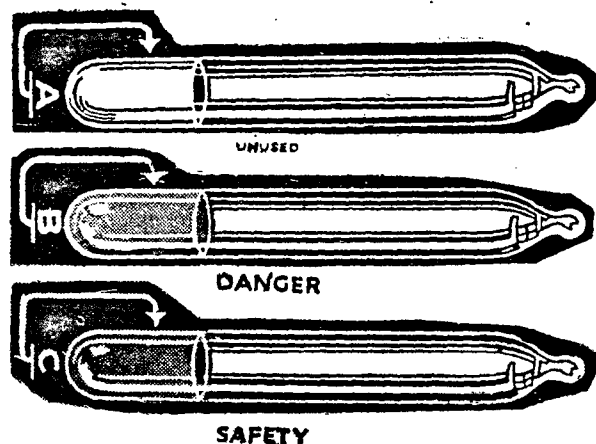
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ORIGINAL ARTICLES

ETIOLOGY AND TREATMENT OF THE COMMON TYPES OF ANAEMIAS*

BY

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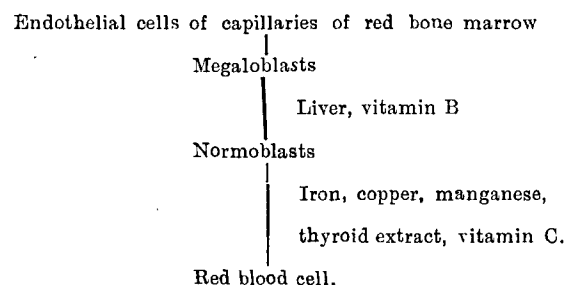
THE knowledge of the etiology of the anaemias has undergone a considerable change within the last few years. We are now able to understand the cause of many of the anaemias which were formerly called "primary" or "idiopathic". Though a good amount of untrodden field has to be explored, yet the therapeutics of anaemias has advanced a good deal as a consequence of the clearer conception of the etiology.

Classification of the anaemias is fraught with considerable difficulties and different workers classify anaemias in different ways. Some classify according to the mode of causation of the anaemias: others classify according to the size of the red blood cells. No attempt is made in this paper to classify the anaemias but the main groups of anaemias will be considered.

Development of the red blood cells.—In order to obtain a clear conception of the anaemias the development of the red blood cells should be explained. The red blood cells are developed from the endothelial cells lining the capillaries of the red bone marrow. Red bone marrow is present in the flat bones e.g. skull, ribs, sternum, and vertebrae and to a little extent in the upper

* Specially contributed to 'The Antiseptic'.

third of femur and humerus. The rest of the bone marrow of the long bones consists of yellow marrow, which does not form red cells in health, but is called upon to act in cases of emergency *e.g.*, haemorrhage, anaemia or infection. The yellow marrow is then converted into red marrow. The following table illustrates how the different stages are formed from the endothelial cells to the fully formed red blood cell.



The substance necessary for the formation of megaloblasts from endothelial cells is not known. For the maturation of megaloblasts to normoblasts liver extract and vitamin B are necessary. The megaloblast is a nucleated cell, which contains some amount of haemoglobin. For the maturation of normoblast, which is also a nucleated red cell containing more haemoglobin than its predecessor, several substances are necessary. These are iron, copper, manganese, thyroxin and vitamin C. The exact role played by copper and manganese in the development of red cells is not known, but traces of these substances are necessary for haemopoiesis. The fully formed red cell is a non-nucleated bi-concave cell containing haemoglobin. It is clear from the above table that the development may be arrested at any stage due to deficiency of any of the substances. For instance if there is deficiency of the haemopoietic substance in the liver or vitamin B in diet, megalocytic anaemia is produced. If there is deficiency of iron, copper etc., normoblastic anaemia will be produced. This group comprises the secondary anaemias which are by far the most common of all types of anaemias.

Megalocytic anaemias.—The common types of megalocytic anaemias are pernicious anaemia, sprue, and tropical macrocytic anaemia. Pernicious anaemia is due to a deficiency of a specific anti-anaemic factor in the stomach. In normal persons this factor acts on the different food substances and produces a haemopoietic substance, which is deposited in the liver. This haemopoietic substance produces maturation of megaloblasts into normoblasts. Pernicious anaemia patients derive benefit by taking

either extract of stomach which contains this factor or taking whole liver or liver extract, which contains the haemopoietic substance.

Sprue is a disease of tropical countries and is found mostly among Europeans. The etiology is very nearly the same as in pernicious anaemia but other factors act as well.

Tropical macrocytic anaemia is a disease found among pregnant women in certain parts of India. It is due to deficiency of certain substances in food materials *e.g.* vitamin B. Blood picture of megalocytic anaemias is characteristic. There is diminution of red cell count, which varies from 1 million to 3 or 4 millions, diminished percentage of haemoglobin but relatively less diminution than the proportion of red cells, so that the colour index is above one. The average size of red cells is larger than normal, the normal average diameter being 7.2μ ; but in megalocytic anaemias it is 8μ or more. Hence this type of anaemias is often called macrocytic anaemias. The number of white cells is either normal or below normal.

Secondary anaemia.—This type of anaemia is associated with many organic diseases. Acute haemorrhage forms an important cause and it occurs in trauma, haematemesis, childbirth etc. Chronic haemorrhage as occurs in bleeding piles, menorrhagia, also causes anaemia. The other important causes are :—

- (a) Infections *e.g.* rheumatic fever, typhoid fever,
- (b) Cancer of any organ of the body especially stomach. Apart from the anaemia caused by infection and loss of blood from the site of the cancer, anaemia may also be produced from invasion of the red bone marrow by metastases from the primary focus. This may happen even when the primary growth is too small to cause symptoms.
- (c) *Ankylostomiasis.*—Hookworm infection is a very common cause of secondary anaemia in this country. The anaemia is due either to ingestion of blood by a larger number of parasites or liberation of a toxin which destroys red cells. Severe degrees of anaemia are seen in this condition. Secondary anaemia may be recognised by the characteristic blood picture. The red cell count is below 5 millions, haemoglobin percentage is low and colour index is below unity. The average size of red cells is normal or may be below normal.
- (d) *Myxoedema*—In this disease there is deficiency of thyroxin

owing to atrophy of thyroid gland. Secondary anaemia is thus produced due to deficiency of one of the factors for the maturation of normoblasts.

- (e) *Scurvy*.—It is due to deficiency of vitamin C in diet and is found in people who do not take fresh fruits and vegetables for a long time. It is characterised by swelling of the gums, sub-periosteal haemorrhages, tenderness of the bones and a secondary anaemia due to failure of normoblasts to mature as normal red cell.
- (f) *Nutritional anaemia of Infants*.—It is found in most infants who are fed artificially and in breast-fed infants of anaemic mothers. It is due to deficiency of iron in the diet and adequate supply of iron cures the condition.

Treatment.—Unless an accurate diagnosis is made, good treatment is not possible. This is only possible by thorough clinical examination of the patient and examination of his blood. Very often a patient suffering from debility is treated as a case of anaemia and vice versa. Appropriate remedies should be prescribed for each of the different kinds of anaemias. It is of no use prescribing liver for secondary anaemias or iron for scurvy. Much valuable time and money are lost if the proper drug is not given, with the result that the patient loses confidence in treatment. Sometimes a combination of liver preparation and iron is given with the idea that it would respond to any type of anaemia, which the patient is suffering from. The result of such a treatment is that the patient will improve, but the practitioner will be at a loss to understand which drug to continue as maintenance dose. The different drugs used for the treatment of the anaemias will now be described.

Liver and Stomach.—Minot and Murphy introduced liver in the treatment of pernicious anaemia. Whole liver, either cooked or raw, was being used until now, the daily dose being half a pound of liver. The patient has to take this amount for a long time and later he has to continue taking certain amount of liver throughout the rest of his life. Nowadays liver extract for oral administration and extracts for injections (*e.g.*, campolon, hepastab etc.) have simplified the treatment very much. The injections are given daily for a few days and then given at longer intervals according to the response of the patient. For sprue parenteral injections of liver should be given and at the same time suitable diet containing diminished amount of fat and carbohydrate should be given. The dose of extract of stomach is

1½ ounces daily. It is sometimes more convenient than liver as smaller amount has to be consumed. Tropical macrocytic anaemia is treated by the administration of vitamin B extract *e.g.*, marmite. Adequate diet should also be prescribed.

Iron.—Iron is of value in majority of secondary hypochromic anaemias. Various preparations have different potencies. Inorganic iron has better haematinic effect than organic iron. Of the inorganic preparations ferrous salts are most active, then come the scale preparations and then the ferric salts. Bland's pill (ferrous carbonate) may be prescribed in a dosage of 10 grains thrice daily; iron and ammonium citrate in a dosage of 15 grains thrice daily after food. Contrary to the popular idea, iron salts seldom cause constipation. On the other hand large doses may produce diarrhoea. Haemoglobin preparations (though fashionable preparations have been introduced in the market and well advertised) have much less haematinic properties and are more costly. Iron should not be given by injections as it is very painful and the therapeutic dose is very nearly equal to toxic dose.

Thyroid extract.—It is of value in cases of myxoedema but is not indicated in other cases of anaemia.

Vitamin C.—Patients suffering from scurvy can only be cured by administration of fresh fruits and vegetables containing vitamin C. No amount of iron will cure the anaemia of scurvy.

Arsenic.—Arsenic preparations were formerly used in cases of anaemia, but they have very little haematinic properties. They are used in cases of leukaemia to stimulate formation of mature white cells from the bone marrow. Its action is very similar to that of X-ray.

Hydrochloric acid.—It has no effect on anaemia but it is given in cases of achlorhydria or hypochlorhydria to relieve dyspepsia. It should be given in doses of 15 minims diluted with 5 ounces of water during meals twice daily.

Blood transfusion.—In severe cases of anaemia whether megalocytic or secondary, blood transfusion is the only means of saving life of the patient. It does not cure anaemia but only improves the condition and later other drugs may be employed. A great care is necessary for the selection of donors and patients should be carefully watched for reactions during and after transfusion.

Conclusion.—It must be mentioned that the practitioner should be on guard against the numerous haematinic preparations that have flooded the market. Only those should be chosen which are based on rational principles. It is only by judicious

use of the right type of drugs that the suffering of the patient can be reduced without unduly taxing his resources.

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REVOLUTION IN SURGERY *

BY

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Mr. President, Col. Sastri, Ladies and Gentlemen,

THE subject I have chosen for my discourse to-night is a vast subject teeming with interesting questions. Though my experience is limited, I shall endeavour in a humble way to place before you some interesting aspects of the question, and also the change of outlook that is warping the Surgeon's mind.

Last month most of us had been to Neyyoor and witnessed the surgical operation performed by Dr. Orr, and I presume that his clinics on the operative technique step by step would not have failed to make a lasting impression on our minds, and we must have been struck at the wonderful advance, surgery has made of late. We found that a great revolution has truly taken place in surgery.

I do not mean to enumerate the series of changes that have occurred in the surgical field in the course of a century from John Hunter, one of the greatest pioneers of the English surgery, down to Lord Lister, the father of antiseptic surgery, but to the real revolution extending over a period of nearly 20 years, during and after the Great War.

You know very well as to why I am inclined to connect this phase of surgical revolution with the Great War. Our modern development in surgery is coincident with and largely influenced by the Great European War. It is in this time of reconstruction that we now live, and witness wonderful surgical feats. The Surgeon during war time came across varieties of heavily infected wounds produced by the modern high speed projectiles during

* A paper read before the Tinnevely District Medical Association at Tiruchendur on 25th April, 1936 and specially sent to 'The Antiseptic' for publication.

action. These wounds presented the surgeon, during the first few months, problems of a rare type. The wards of a military hospital recalled stories of the pre-Listerian era, and attempts were first made to treat this terrible sepsis with Listers' own weapons. Powerful germicides were used to sterilise the wounds in field ambulances but with disastrous results. Necessity now came in for a search for antiseptics equally germicidal but less destructive to the tissues. In this way, the hypochlorite solution, the aniline dyes, flavine, brilliant green etc., which are now extensively used were introduced. Then it was found that if foreign bodies, dirt and all damaged and devitalised tissues were cleanly excised, the wound rapidly healed. The lesson of tissue resistance learnt at great sacrifice in this tragic school dominates the operative surgery of to-day.

Until fairly recently the chest and the brain were regarded as out of bounds to the surgeon, because it was thought that any surgical interference would end in a rapidly fatal tissue. Now-a-days the thoracic surgeon is widening his field of activity by leaps and bounds, and operations which were undreamt of at the beginning of this century, are now very common, for example, removal of tumours of lungs, pleurae and mediastinum, and the drainage of the deep seated pulmonary abscesses, lobectomy and pneumonectomy. Prostatectomy was at one time an extremely hazardous procedure, cholecystectomy was a dangerous task, gastrectomy demanded a heavy toll, whilst thyroidectomy for exophthalmic goitre was so full of risk that it practically had no place in surgery. With reference to all these operations, the prognosis has entirely altered.

A number of successful operations on the heart during and since the War, have shown that heart is not intolerant of surgical manipulation. Heart is being approached by the extra pleural or trans-pleural route. For suppurative pericarditis which is fatal if untreated, incision and free drainage of the pericardial sac, are resorted to. Sir Lauder Brunton suggested surgical treatment for mitral stenosis 25 years ago, and in 1925, Souttar divided the mitral valve approaching it by the left auricular appendage. Cardiac massage in resuscitation in apparent death under anaesthesia is being done by sub diaphragmatic or trans diaphragmatic approach. Embolectomy for the removal of an arterial embolus which is now done is really a bold adventure.

Ladies and Gentlemen, consider the advances made in respect of cranial surgery—the subtemporal craniectomy for approach to the gasserian ganglion, and the trans-sphenoidal approach for

pituitary tumours. Trigeminal neuralgia is being treated by division of the sensory root of the 5th nerve either by temporal route or through the cerebellar fossa. In the hands of experts either method is safe, and mortality is only one per cent. Vertigo of mèneire's disease can be cured by dividing the 8th nerve intracranially. Dr. Alexander made the first deliberate surgical attack upon the sympathetic system when he excised the superior cervical ganglion for Epilepsy. For the relief of pain of Angina Pectoris, Jonnesco operated on the cervical sympathetic ganglion. The splanchnic block so extensively used in abdominal surgery is also an instance of temporary interference with the sympathetic.

Under abdominal surgery, I should like to say a few words. 23 years ago, it seemed inconceivable that duodenal ulcer which had never been diagnosed in a London Hospital, could be a real and common condition pretending as the familiar acid dyspepsia. The treatment underwent a violent change, from *Mistura Soda et Gentian* to radical operation. The student of to-day will be able to recognise an ulcer, confirm with the aid of the Radiologist, and possibly also of the Bio-chemist if a test meal and search for occult blood is beyond his own powers. If an ulcer is present, he will give rest in bed for 4, 5 or more weeks, until all pain, tenderness and rigidity are gone, until the last trace of occult blood has disappeared from the stools, and there is no longer radiographic evidence of an active ulcer. He will treat all foci of infection in mouth, throat and nose, and instruct his patient to follow the regime for the rest of his life if he is to remain free from symptoms. Even cancer and gall stones will trouble the surgeon of the future in very small numbers only. At this rate of advance of knowledge we can confidently hope and even prophesy that the prevention of cancer will be in sight 25 years hence from now.

Coming to Radiology, Ladies and Gentlemen, imagine the wonderful progress it has made in recent years. In the early days the status of the Radiologist was nothing more than that of a photographer; but now we find a revolutionary change in his methods. He has explored all the regions and cavities in the human system. Prof. Morison occupying the chair of Radiology in the London University, says that Radium is a useful auxiliary capable of alleviating distressing symptoms and of prolonging life.

Just one word about the surgery of Thyrotoxicosis which at one time was one of the most dangerous of fields. Now the work of the physician and the Bio-chemist has rendered it one of the safest. Mortality at the Middlesex Hospital on all

cases of Toxic Goitre is under 1 per cent. Pre-operative administration of iodine and repeated investigation of the Basal Metabolic Rate has reduced the surgeon to a mere carpenter in the hands of the physician and the Bio-chemist.

Ladies and Gentlemen, you will be astonished to note the great advance in traumatic surgery during the last few years, advocated by Bohler, Director of the Hospital for accidents in Vienna. The plaster of Paris technique in the modern treatment of fractures is a distinct improvement over old methods. Many cases of Pott's fracture and fracture of Tibia can walk home the same day of admission and need not stay in bed even for one day. Plaster of Paris is unequalled for the fixation of fractures, but the method of application has to be learnt, and unless the surgeon knows how to apply the coats, the results will be poor. Compound fractures are being treated by Winnet Orr's method, cleansing the wound, packing it with vaseline and sterile gauze fixation by pins and closing with plaster coats. Nowadays, Colles' fracture is treated by putting the reduced arm in plaster cases in the flexed and adducted position, and massage and passive movements begun early. Old fashioned treatment by splints are nowadays condemned.

No better instances of the advance in pre-operative and post-operative treatment could be given than the studies which have been made in the surgery of diabetes. Not many years ago, the smallest surgical intervention in a diabetic was looked down upon with horror and apprehension; for about 50 % of the patients died. Now the mortality is less than 5 %.

A spirit of enquiry and thirst for knowledge goaded the great surgeons on to pursue their searches in unexplored regions. There was a time when it was bitterly commented that "to perform an operation was to mutilate a patient we cannot cure". Would any of you believe that such a reputed surgeon as John Hunter could have made that remark? But that was probably due to the then state of surgery.

Looking back over a period of the last 20 years, one realises that there are many events of great importance worth mentioning. For example, the consolidation of the gains of asepsis over anti-sepsis, resulting in a perfect technique, or the revolution following the application of X-rays to diagnosis. During and after the war specialists came into existence, and specialism has developed so much that there was no place for the general surgeon. Surgery threatened to divide itself into numerous branches, so that now we have proctologists and urologists, surgeons for the brain, surgeon

for the eye, the ear, the nose and throat, as well as radiologists, cardiologists, gastrologists, neurologists and many others. It is not confined to any particular country, but it has spread throughout the world, although it has reached its height in America where there is hardly an organ or a special function of the body to which a specialist is not attached.

Modern science makes use of almost every branch of natural sciences, through the mutual help of which instruments of precision for diagnosis, for detailed examination or for treatment are found out. Take one example: consider the effect of the discovery of the reflecting mirror. It has illumined the darkest recesses of the body, it has given the ophthalmoscope, the laryngoscope and the cystoscope, the gastroscope, the bronchoscope and the thirocroscope. It has thrown a revealing light on many hidden mysteries. Thus medicine has become so big a subject, the number of facts to be remembered so great that man's mind cannot grasp them all at once with their meaning and application. He has been forced to devote his attention to a limited field. This is the main reason for the rise in specialisation.

Team spirit is the phenomenon of the Great War and of post war surgery. The secret of the success of William and Charles Mayo was the development of the team spirit.

It would be interesting to learn that old men are trying to become young again. To this end, Vaso ligature by Steinach and testicular grafting by Voronoff are practised. At present it is very difficult to estimate the results of the rejuvenation operations.

Recent advances in plastic surgery may be considered a real triumph to the art. Mutilations by injury or disease are rectified without much difference and the unfortunate patient need no more suffer from the disabilities of his deformity. This phase of work seems to have so developed in the west as to have produced a special class of professionals called 'Beauty Specialists', who can change your brows or nose or lips to any shape or place you want'.

Speaking of 'revolution in surgery' one cannot help looking back at the vast strides in the field of anaesthetics. General anaesthesia has given place largely to local and spinal anaesthesia, which are safer and more pleasant and convenient. For one belonging to the passing generations, it looks almost unbelievable that a surgeon could handle painlessly almost any part of the human anatomy. Most recently, we have heard of intravenous and rectal anaesthetics and I dare say, we haven't heard the last word on anaesthetics yet.

Enough has been said to show that slowly yet surely a revolution has been taking place in surgical outlook, surgical treatment and surgical prognosis. This is true of every province of surgery. The cruel withholding of fluids after laparotomy, the painful, unnecessary and harmful purging both before and after operation, the unkindly restraint are things of the past. The sufferer from an abdominal complaint necessitating a surgical operation may well be thankful he was not born 50 years before.

Ladies and Gentlemen, allow me to thank you for your kind and patient hearing.

I thank Col. T. S. Sastri, I.M.S., for giving me permission for publication of this paper.

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SURGICAL PROBLEMS*

BY

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I PROPOSE to deal with this subject according to the classification we adopt in our annual returns.

Operations on Tumours and Cyst

First of all, examine the tumour carefully, its situation, anatomical position, motility of skin over the tumour, whether it is pedunculated or non-pedunculated, whether it is a simple one or a malignant one. After having decided the tumour is operable, don't fail to make a suitable long incision and remove the tumour by a careful dissection viewing everything instead of blindly cutting. Be careful to arrest all haemorrhages. I even now think vividly of two cases while I was in the Circars—one a tumour of parotid, inadvertently opened by a private practitioner, which began to bleed severely. He ran up 20 miles in a car with the patient, the small incision, with which he fiddled, being packed with all the gauze he stored in his dispensary. The other case I still remember was a wrong diagnosis of malignant secondary cyst

* A lecture delivered before the South Arcot District Medical Association, and specially sent to 'The Antiseptic' for publication.

glands in the sub-maxillary region, left side, which the medical officer mistook for a primary tumour and began the dissection and got nonplussed when he saw the extension of so-called primary tumour underneath the anterior margin of sterno-mastoid, as you all know secondary deposits appear in the anterior deep glands on either side of the internal jugular vein. He closed up the incision and sent him to Coconada where it was noticed that the patient had a primary cancer of middle third of the left half of tongue. Though interstitial radium needles implantation into the growth and block dissection of the neck was the proper course, owing to the absence of the radium, we tried the lingual artery of left and made a block dissection of the neck on the left side which is quite easy if one knows the anatomy and then we opened the mouth, removed the left half of the tongue as far as possible and folded the tongue on itself and sutured. The man had a wonderful recovery and I observed him for two years and there was no recurrence. The second case, I am sure, will bring to your mind, that a proper diagnosis, one should make and a thorough knowledge of anatomy, one must possess, before he decides to do any operation on the neck.

Abscess

Now passing on to the abscess, while I was in the Ceded districts, I was consulted by two patients, one a young boy of 8 having a salivary fistula and the other with facial paralysis of one side. The history of the former was that he had abscess in the parotid region after typhoid; the other case had a similar abscess, cause being not known. Both had vertical scar as a result of surgeon's knife, who opened the abscess. I need not here debate that a little forethought and a little thought over anatomical position of structures would have prevented these uncorrectable conditions. I have come across several cases where cold abscesses in the neck, in the chest and even psoas abscess have been opened and as a result, secondary infection, persistent sinus and amyloid degeneration and finally death have been the result. A little careful examination would have revealed the five classical signs and symptoms of caries of spine, namely, pain, deformity, rigidity, abscess formation and nervous phenomena. A little knowledge of the site of the abscesses in caries of various regions would put one on the guard and useful aspiration treatment with immobilization of the affected part in plaster will prevent secondary infection which is the one thing which one has to guard against in chronic tubercular abscess.

I have recalled to my mind another interesting case where an old man of 60 was admitted in one premier institution in Madras with pain, tenderness, redness, heat and fluctuation in the popliteal region stimulating an ordinary abscess on one of the admission and operating days of a surgeon whose ward was full and who wanted to clear off as much as possible rapidly and as such made a superficial examination and put in his knife into the swelling and to his surprise and to everybody's in the theatre, it was a popliteal aneurysm. The artery had to be tied rapidly in the external iliac region retro-peritoneally and the limb had to be disarticulated in the region of the hip—a severe operation and the patient succumbed. This case was brought to your notice so that you may be careful about aneurysms in the various regions and keep that possibility in mind in your examination.

Surgical Affections of Skin and Subcutaneous Tissue

Coming to carbuncles, I find here again all kinds of treatments and all kinds of unfavourable results. I have found out during my association with that great surgeon, Col. Bradfield, and later independently after I left him, that by crucial incision, raising of flaps and packing with gauze soaked in saturated mag. sulph. solution, and glycerine acid carbolic B. P. equal parts, insulin, 10, 20 or even 40 units daily depending on blood sugar and anti-diabetic diet, consisting of raw egg, ragi, brown bread, bran biscuits, juicy fruits, vegetables calculated upon body weight of individual, practically we had cent per cent success. Coming to whitlow, again I find the treatment very unsatisfactory and no thought is bestowed upon by many of our friends who tackle it. If one only understands the arrangements of sheaths in the palm and if only realizes that sheaths of the thumb and little finger extend to the fore-arm underneath the volar transverse carpal ligament and also he bestows a little thought on the arrangement of flexor tendons in the palm and fingers, the common sequelae which I had noticed in patients who were operated elsewhere and who came with either extension of pus in the fore-arm or cicatrix of the incision flaxing the finger completely which cannot be extended at all, could be arrested. All these sequelae are seen in the thecal variety of Whitlow. Incision on either side of flexor tendons and opening into the thecal laterally and never encroaching upon the inter-phalangeal joint will prevent these permanent deformities. Next affection is keloid. I have seen brother practitioners attempting to cure keloid by excision and what do you find after a few years, a bigger

keloid. The best treatment to my mind is radium pack over the area if patient can afford and the keloid disappears wonderfully.

Surgical Affections of Bone

First and foremost thing is fracture and you all know that fracture can be classified into simple and compound. All simple fractures except that of femur can be treated with the aid of plaster and I respectfully refer you to Dr. Narasimhai's article on plaster treatment of simple fractures in Col. Anderson's Ward which appeared in 'The Antiseptic'. Plaster treatment is quite easy efficient and requires little knack and by that you can discard all costly splints and appliances of old. It was only the other day that a man who had a simple fore-arm fracture and who was treated by a doctor in a neighbouring district with anterior and posterior splints resulting in Volkman's Ischemic Contracture—an affection which every one of you knows is irreparable, consulted me and I had to admit our utter inability to rectify the condition. I have seen similar results in faulty treatment of supra condylar fractures in children. I have seen also in several cases due to the prolonged immobilization in splints, the joints above and below the fracture have become stiff and as a consequence stiff limb resulted. I have brought to your notice these irreparable sequelae as a result of tight splinting or prolonged immobilization and I am sure it will be of use to you when you treat fractures.

Now I pass on to sequesterotomy. Here again I find the same incomplete treatment at several places. Here again I want to warn my colleagues that Sequesterotomy should not be lightly undertaken and when one does it he must have a skiagram to show the position of Sequestera and after the removal of the Sequestera thoroughly, the cavity must be packed with vaseline gauze and the limb enclosed in plaster.

Let me now pass on without offering any remarks on subjects like orthopaedics, eye, ear, nose and throat. Because they are the realm of the specialist. Yet I must say that anyone in the mofussil must be able to tackle and do the common operations as cataract, enucleations of eyeball, evisceration of eyeball, excision of lachrymal sac, Schwart operation for drainage of mastoid antrum and enucleations of tonsils.

Surgical Affections of Breast

The most common affection one meets with, is abscess of breast and I am sure all of you are aware of the three varieties of abscesses—Supra-Mammary, Interlobular and Sub-mammary,

and of these the Interlobular is the most common during, before and after Puerperium. I have come across several cases tackled outside and coming for consultation owing to the persistence of a small sinus. If only the surgeon who first dealt with it had observed the following conditions, after-sinus will be rare. The conditions are radial incision to the nipple, counter incision at the most dependant part, drainage carried with big drainage tube which should be shortened from below so that the wound is allowed to heal from above and stoppage of suckling of the child, also little pot-iodide internally and dry food. These will help in drying the wound. The common mistake I have noticed, is to allow the child to suckle even during treatment with the result wound never heals.

Simple tumours of breast are usually adenoma seen in the young woman, tender during menstruation, axillary glands not enlarged, not adherent to the skin and deeper tissues. Though they are benign, it is better to enucleate it by an incision along the lower fold of the breast lifting up the breast and enucleating the tumour from its deep surface, and then closing up the incision with drainage for 24 hours. This scar is invisible by this incision. This method is simple. I have seen all kinds of ghastly scars as a result of enucleating these tumours.

Malignant Tumours

Usually Scirrhus cancer. Though American Surgeons prefer dealing with this condition by radium and they want 300 milligrams for tackling this condition, yet we in the mofussil cannot at any time dream of 300 milligrams of radium and the old operation of Hallstead, namely, complete amputation of the breast with removal of both pectorals and incision of all the glands in the axilla still holds good. But the common mistake which is done by majority of surgeons in the mofussil is non-removal of the fascia over Rectus, external oblique, serratus anterior, and opposite pectorals; since you know extension in breast cancer is by one of five methods namely, lymphatic permeation, lymphatic infiltration, lymphatic stream, blood stream, and Trans coelomic implantation of which lymphatic permeation is the most common and takes place by an extension along the fascia over the muscles radially which produces recurrence, all the fascia must be dissected out carefully.

Affections of Abdominal Walls

The chief surgical affection is hernia. Now coming to inguinal hernia, the two main varieties you find most common

are direct and indirect. The direct can be easily distinguished from the indirect by the following characteristics, namely, it comes through Hasselbacks triangle, it is small, never becomes complete, cord is felt separately and outside the swelling, the line of taxis is directly posterior met mostly in old people, and in majority of cases has got a portion of a bladder in the sac as such vesicular symptoms are more common. I have given you the characteristics of direct hernia so that you can remember about bladder since I knew of one surgeon of repute tied and cut the bladder in excising the sac and the patient developed haematuria and died. As regards indirect hernia I find number of recurrences and this is partly due to :—

- (1) bad selection of cases, namely, hernia in old people with very weak abdominal wall, double hernia and long standing, big, unreducible hernia where the intestines were remaining for ages in scrotum,
- (2) failure to tackle the cause of hernia, as Phymosis, Stricture, Enlarged Prostate, Vesical Stone and so on,
- (3) faulty operative technique,
 - (a) failure to excise the entire sac,
 - (b) failure to put deep stitches,
 - (c) injury to ilea-inguinal nerve,
 - (d) sepsis. In putting deep stitches namely, approximating inguinal ligament to conjoint tendon care should be taken not to injure the femoral vein, which catastrophe did take place to some surgeons.

Now coming to the strangulated hernia, the best procedure is quick interference, the best anaesthetic is the local anaesthesia and the blocking of nine, ten, eleven and twelve intercostal nerves and the long peroneal nerve which is the branch of sciatic and also infiltrating the line of incision. Chloroform is contraindicated owing to high acidosis and spinal contraindicated because of the myocardial deficiency. It is quite easy to do under local. When the sac is opened, dealing with the gut which is the content of the sac, depends upon its condition. If it revives under hot saline and there is visible peristalsis the gut can be reduced into the abdomen with safety. If the gut keeps good colour but it does not show any visible peristalsis hot saline mopping, better, free the constriction and keep the gut outside covered by the hot saline sponges for 12 to 24 hours and if it shows viability by this

time to reduce it inside the abdomen. If the gut is gangrenous and if the patient's condition is allowable to do resection of the gut and to do an end to end anastomosis which is an easy procedure; and if the patient's condition is unsatisfactory to do a Colostomy of the affected loop after lateral anastomosis of the two limbs of the gut below quickly. I have seen very good results by the above procedure.

Now I pass on without touching gastric surgery, intestinal surgery, surgery of gall bladder, liver and spleen, since they themselves can be made the subjects of several similar lectures and as the time at my disposal is very short, I have to pass to other common surgical affections noticed in the mofussil.

Rectal Surgery

The most common surgical affections which are being treated are piles, Fistula-in-ano and Prolapse Rectum. Now coming to piles the best treatment to my mind is injection treatment. Here under caudal anaesthesia, rectal speculum put in and the position and size and number of the piles are viewed and each pile is injected with three minims of carbolic in almond oil, one in ten till the pile is blanched and each pile is dealt with at three or four sittings. Injections are being done once in 4 days with the aid of a special syringe. In the absence of this method ligature and excision is the method usually employed. Never do White-Head's operation since it gives rise to very bad stricture. I have seen several cases of this sort after White Head's. Examine before doing the pile operation if the patient is a man, for heart, renal, early cirrhosis of liver, for, you get piles in these conditions as a sort of safety valve and if the patient is a woman for displacements of the uterus and gravid uterus. Dealing with the inflamed pile take care lest the thrombus might be carried to portal circulation and portal pyaemia may result. I have seen two such cases during my stay in General Hospital.

Now coming to the Fistula in Ano never cut the sphincter as taught in books. It gives rise to incontinence of faeces. Always allow the Fistula to heal from the bottom. Early movements in fistula is bad.

Now coming to the prolapse of rectum, first of all eliminate all causes as debility, old age, enlarged prostate, tumour rectum, chronic dysentery and diarrhoea. In the absence of the above causes you do Lockhart Mammery operation wherein a circular incision is made between the Coccyx and the posterior margin of the anus and the rectum is lifted up from the hollow of the

sacrum and packed into the space with vaseline gauze. Don't pack it too tight lest you get gangrene of the bowel and gradually remove the gauze in small portions taking three weeks to remove the whole. I have seen all kinds of operations as Recto-pxy, removing a wedge shaped piece of the prolapsed portion and so on. But the results from these are nothing when compared with Lockhart Mammary operation.

Genito-Urinary Surgery

Taking the common surgical affections of bladder in mofussil the most common affection is stone bladder or foreign body bladder as broken catheter. Stone bladder can be diagnosed by the classical symptoms and a radiogram where it is available and in its absence sounding with Thompson's Bladder Sounds. The operation in our Presidency is suprapubic Lithotomy and to this day I have not seen lithotripsy done in Madras, though in the Northern India every case is done by lithotripsy only. My tip to you is, when you do a suprapubic lithotomy never close a bladder which is septic, but drain it by a big tube and put also a drain in the cave of Retzius. You will find cent per cent success. I have seen surgeons closing up a bladder wherefrom an adherent septic phosphatic stone has been removed with the result the patient died of ascending infections.

Now I pass on to the surgical affection of the prostate. The most common thing being enlarged Hyper-trophied prostate with classical symptoms as frequency of micturition, small stream, thin stream, twisted stream, sudden urinary obstruction, generally seen in old people. If the affection is troublesome, first of all the amount of residual urine, and the blood urea have to be estimated and the patient's heart and lungs must be toned and the bladder must be gradually decompressed and antiseptic bladder washes to be given for a few days and under spinal anaesthesia supra pubic prostatectomy must be done; which is an easy procedure if one knows to insinuate between the prostate and its sheath derived from pelvic fascia. Haemorrhage is controlled by hot irrigation and bladder is drained by a big tube and rubber catheter is passed per urethra and it is connected to a bottle containing antiseptic fluid. Bladder tube is removed by the 8th day. Generally the patient passes urine by Urethra on the 21st day.

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intra-vesical instillation of 10 c.c. of phage in 50 c.c. of lukewarm water; at the end of a week patient is fit for operation.

Now coming to the Urethra, the common surgical affections are rupture of the urethra and stricture. Now coming to the traumatic rupture of the Urethra the books teach you to pass a rubber catheter and to keep it in for a week if you are successful in passing. But if you do it, in actual practice you find a dense stricture formed at the site of the rupture. The best procedure to my mind is deviation of urine either by Pessier's tube in bladder or an external urethrotomy behind the rupture and the draining of the bladder by catheter through this opening and then repair the rupture.

Now passing on to stricture of urethra you can divide the stricture into passable and impassable. In impassable stricture you do Wheel House external Urethrotomy. In passable stricture you do gradual or rapid dilatation. In dilating, use a fairly big sound to start with for dilatation. Never try small sound, never force a sound. I have seen recently two cases where patients are passing urine by rectum and two other cases where they are passing urine by holes in the perineum. If it is a passable stricture which can allow only four 'F' either external Urethrotomy by Syme's method or internal urethrotomy with the aid of Filiform Bougis may be done. In some very bad cases Retro Grade dilatation by opening into the bladder has to be done. In the presence of perineal fistula do only a Wheel House and complete excision of all fistulae. Dilatation of stricture is not an easy operation and much damage is caused to the patient by inexperienced people forcing the instrument. When I was working under Col. Bradfield as his assistant, he had given his assistants chances to do all kinds of abdominal operations but not a dilatation, since he was of opinion that dilatation was a difficult operation in the sense that the patient will be a chronic sufferer to the rest of his life, if any fault is committed in the technique, resulting in a false passage. Now I pass on to surgical affections of *penis*. The most common affection being, Phymosis and Cancer penis. I need not say anything about Phymosis—but the common mistake committed is leaving either too much skin or taking away too much mucous membrane. I have seen one case brought in the middle of the night profusely bleeding after phymosis operation due to the surgeon not tying the artery of the prepuce.

Coming to cancer penis the modern operation is interstitial implantation of radium needles 6 to 8 of one milligram and

radium pads to the groin and I have seen very good results; but in the mofussil still we do total amputation. The whole operation can be done in 40 minutes without shedding a drop of blood. I have seen very ghastly sights during this operation and I am sure with little knowledge of anatomy this can be prevented.

Scrotal Surgery

The most common surgical operations are Elephantoid Scrotum and Hydrocele. As regards the Elephantoid Scrotum, I prefer complete excision of the whole scrotal tissue and putting the testicles on either side in pockets in the thighs underneath the skin and the skin grafting of penis latter by Riverdin's methods. Some surgeons prefer to use a portion of scrotal skin itself to form a new scrotum and I met with a few cases from a neighbouring district recently where the elephantoid condition has recurred in the newly formed scrotum made of such tissue.

Now coming to the Hydrocele, I prefer to do the radical operation by the usual hernia incision in very small hydrocele, since by this method we get rid of sepsis which is common in scrotal incisions whatever precautions we may take. In double Hydroceles of bigger size if the scrotal skin is not redundant I prefer doing by a single media incision and if the scrotal skin is redundant I prefer to excise a V shaped portion of skin in addition, as by this method the scrotum will be made small and the patient is pleased.

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MEDICO-LEGAL NECROPSY*

BY

CAPT. P. BANNERJEE, M.B., A.I.R.O.,

Assistant Surgeon, Tangail, (Ex. Teacher, Medical Jurisprudence.)

It is a common belief that the medico-legal necropsy can be done by any and every medical practitioner. Even amongst the medical men there is a great majority who has got the same idea about necropsy. In the Educational Institutions, both under the University and the State Medical Faculty, this branch of the State Medicine, if not totally neglected, is treated with a step-motherly attitude. Medical Jurisprudence is considered as a minor subject both by the University as well as by the State Medical Faculty. My contention is not that it is the only subject which should be taught but that, as the presumption of law is that any medical officer who examines a case either living or dead is the expert for that particular case, the subject should be dealt with less niggardly by the teaching institutions than it is being done now.

In Bengal, the Medico-legal necropsy is undertaken by the Civil Surgeons in the Head Quarters though in the majority of the cases it is actually delegated to their subordinates namely the Assistant Surgeons or the Sub-Assistant Surgeons as the case may be, when they are placed in the Sadar. In the mofussil they are done by Assistant Surgeons or the Sub-Assistant Surgeons in charge of the stations as the case may be. Generally speaking the brunt of the work falls on the Civil Assistant Surgeons. According to the Coroner's Act in England every medical practitioner is liable to undertake the necropsy if so asked, under penalty. But generally that is undertaken by 'Specialized men'. In India it is done by the people employed by the Government, and in places where there is Coroner, the Police Surgeon does the work.

All the bodies, where there is bona-fide suspicion as to the cause of death, are sent to the medical examiner at the respective head quarters by the Police who get the information from the Panchayets, the daffadars and chowkidars or from the private parties. Due to the difficulty of communications, caste prejudices etc., there is some delay in despatching the body to the head quarters and generally the body arrives in a decomposed state; added to this, the climatic influence plays no less an important part.

* Specially contributed to 'The Antiseptic'

For this reason there is a provision in the Criminal Procedure Code empowering the Police to dispose of bona-fide accidents and suicidal death. Those of us who have been at it for some time, know fully well that it is totally impossible to ascertain the cause of death by "viewing the body." Without suspecting the bona-fide of the Police it may be said that the Police have been empowered too much by this section and as the means of communication have been decidedly improved in recent years, it will be better to send all bodies of suspicious and accidental deaths as well, so as to meet the ends of justice. Hence it is high time for the authorities to move in order to amend the Law. In the Presidency cities though the same law is applicable, it is rather an exception to allow a body to be disposed of without necropsy than a rule. The same should be the principle everywhere.

The Police bring the inquest reports and empower the medical officer to hold an autopsy, but it is customary not to send the disposal order of the body after the autopsy. In cases where the body is claimed by the relatives, it is handed over to them after necropsy and in those of unclaimed bodies, the disposal is done by the municipal domes or the domes attached to the Morgue by burial in the mofussil. This custom is working well and very rarely this method of disposal of bodies is questioned. Very rarely here the question of exhumations of bodies after the Post Mortem Examinations, arise and in cases of claimed bodies they are burnt by the Hindus. But the medical officer's orders for the disposal of bodies at his own risk is too great a one that he takes on his own shoulder. A disposal order should be issued by the Police or a Magistrate, otherwise a time will come when there will be difficulties as to the relevancy of the disposal order of the dead body by the medical examiner, as in cases of exhumation of the bodies it will be difficult, if not impossible to identify the remains of a dead body some time after. I shall be glad to have the opinions of other medical officers of different parts of the country as to the solution, so that we may approach the proper authorities for the proper disposal order.

It is not customary for the medical examiner in Bengal to view the body at the site of occurrence though it is being taught theoretically to all students of Medical Jurisprudence. It is needless to point out that it will help a good deal to elucidate matters if the examiner is called upon to see the site of occurrence. But the custom here is to send the body to him at his station in a most crude way and handled by the people who cannot appreciate the importance of Medico-legal examination. So many post mortem

injuries appear in the different parts of the body apart from the other things that occur due to the climatic conditions, *e.g.*, flies, carnivorous animals, rats etc. Probably it is due to the fact that the average post mortem examiner is not a wholetime officer and the major part of his time is taken up for the hospital and other civil administration of his department.

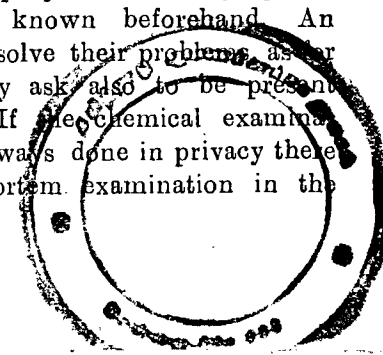
The custom here is to have the inquest report by the Police. The inquest report in majority of the cases is absolutely a valueless document, as "it is really a matter of *form*" rather than real information supplied to the examiner. In majority of the reports nothing is written as to the cause or suspicion for which the body is sent except a word or two in the chalan. It will help the matter most if the examiner is informed of all the important factors leading to the suspicion. It is probably a common experience of all the examiners that even in cases of hanging, the rope is opened from the neck and sometimes the ligature is never sent. In cases of homicidal injuries the weapons are for the first time shown to the examiner in a Court of Law; but if it had been sent along with the body (of course when available) it is needless to say that the examiner would be in a much better position to form his opinion and even sometimes find out conclusive proofs whether a particular weapon has been used or not; *e.g.*, when the tips of a penetrating weapon as for example a knife is broken, the missing part of the metal may be searched for in the body and in case of indentations in the weapon, search may be made whether it has cut the bone as to cause its edge being indented. In cases of gunshot injury, the body is sprinkled with charcoal powders. It does not require much imagination to understand how very difficult it becomes for an examiner to give an opinion as to the nearness or otherwise of firearm as the blackening and tattooing is simulated by these powders. In some cases ash is used and it requires a good deal of patience to wash the body carefully. It cannot be left to the Dome or the Morgue assistant who will try to minimise the labour and time by rubbing the body with water and rag so as to obliterate the finer things namely the tail end of a wound or the margins of a wound and also washing away the effused clotted blood. It is really difficult and tiring in the major part of the year, as the bodies generally come in a decomposed state. I have enquired into the origin of this method of treatment accorded to the dead bodies and have been told that such directions are given in the Police Regulations, Bengal. If that be the case the authorities should move in the matter at least to

stop sprinkling the black charcoal powder in gunshot injuries if it cannot be stopped altogether, in all cases. I venture to say that neither the charcoal powder nor the ash as used acts as a preservative or a deodorant. Furthermore, sometimes comes a request from the police that a finger print may be taken by the medical officer. The Police officers sometimes feel scruples especially in highly decomposed bodies. Dactylography is a special Science which requires training and experience for the proper impression. It should not be left to the medical examiner but better taken by the Police who are specially trained for the purpose. It is also said that the P. R. B. empowers them to leave it to the medical examiner.

I have already said that the prevailing idea that any medical man can do justice to a medico-legal necropsy is fallacious. He should be well versed in Toxicology and Pathological conditions and the principles of medicine and surgery along with knowledge of the allied sciences. The careful post mortem examination of a human body, to find out, in all its details, the cause of death, is without doubt one of the difficult problems of accurate diagnosis. All the signs must be evaluated in their entirety; so a man who has not got the idea of the pathological conditions, a man is prone to, cannot state off hand by a necropsy. It requires a good deal of patience and experience which must be accumulated by a series of works in the line. He should be free from bias and should not be deterred by the criticism. In one word he should be a non-party man, only dealing with the scientific facts observed and evaluating them with relation to the Law as to meet the ends of justice. The importance of a careful and painstaking examination and analysis carried out with an open mind, not swayed by the emotional outburst of the press or public nor clouded by pre-formed conceptions gathered from similar cases, must be stressed. The medico-legal expert should be well versed in all fields of general pathology including bacteriology but specially in pathological anatomy so that he can recognise a non-medico-legal death. It is needless to point out that a pathologist is not necessarily a competent medico-legal examiner because he is not in a position to state or adjudicate the causation of an injury and its likely effect. He is also expected to be well conversant with the present-day knowledge of surgery and medicine and other allied sciences and must have a thorough training both in theoretical and practical medico-legal work. Therefore a medico-legal examiner should be placed under training for these branches of Science and must work as an assistant to a full-fledged

medico-legal examiner before getting an independent charge; so that he may acquire practical knowledge and rare power of adapting his knowledge and experience to emergencies. He should be able to elucidate any difficult medico-legal question which may arise and should be able, from his general knowledge of all principles, to elucidate matters as to the criminality or otherwise and must be in a position to place the subject before the Judge and the Jury to come to a definite conclusion. Hence it is needless to point out that an average medical man, with his scanty knowledge, of the subject will not be in a position to form a correct idea of a case.

Recently occasions have arisen at Dacca, Mymensingh and other places and there has been a suggestion whether a medical man on behalf of a party can be admitted in the morgue during the post mortem examination. It is needless to say that he is a partisan for monetary gain or for some other reason and as such his opinion is likely to lean to the side of his party. Furthermore his experience to evaluate the post mortem findings is a questionable one. Generally an average medical practitioner except those in Government service is not conversant with the pathological findings or the value of an injury inflicted on a body. It requires a good deal of experience before a man is in a position to shift evidence. So it will be a mistake to allow an inexperienced man in the morgue. Further, there is nothing to disbelieve a government medical officer as he has nothing to gain or lose if the case ends in conviction or acquittal. In other administrative works of the different departments of the Government the scrutiny is not allowed and how should it become an object of scrutiny in a highly technical matter which requires the experience of years? The other difficulty which is likely to arise in cases where the medical examiner disagrees with any practitioner thus admitted is that, the controversy will be puzzling to the Judge and Jury in coming to a conclusion. Furthermore the post mortem report is treated as a confidential document and whether it is fair for the complainant or the defendant to come to know all the facts before it is placed in a Court of Law is more than I can say. It is for the technical people of Law to judge the advisability of making these points known beforehand. An admission in the morgue will not solve their problems, as for example in cases of poisoning they may ask also to be present at the time of chemical examination. If the chemical examination and other examinations are always done in privacy there should be no objection to the post mortem examination in the



same manner. The reasons against the admission of lay outsiders in these places are too manifest to mention in detail. In the Continent and America, they are not admitted and in my opinion it is better the same custom is adopted by us.

The necropsy proper.—I do not like to go much in detail as to how a Medico-legal necropsy is to be undertaken, but a few subtle points are worth mentioning. It is needless to point out that the identification of the body is to be made by the Police, and relations accompanying the body in order to establish the chain of evidence. It is of utmost importance to inform the local Officers of Police to have the body photographed in cases of unidentified bodies and all features leading to identification should be carefully noted namely, scars, tattoo marks, arrangement of teeth, presence of tooth plate or broken teeth, any bony exostosis or outgrowths, any mal-union, extra fingers or toes, malformations, colour of the hair, and colour of the eyes if not very hazy due to decomposition—any thing which is peculiar to an individual to be recorded in full. It is always safe to examine the clothes and keep notes about them. My practice is always to put my signatures on the garments stretched with a coloured pencil e.g. a moistened copying pencil in cases of white garments and suitable coloured skinpencils for other garments with dates. The clothes should be examined in relation to a particular wound before they are undressed and in cases of gunshot injuries particular attention should be given to the blackening etc. and should be carefully folded and preserved. They should be handed over to the Police for further enquiries but before they are handed over some arrangement for the future identification must be made.

The most important part of a medico-legal necropsy is the external examinations in violent deaths except poisoning; so utmost care should be employed for it. The body is to be weighed but in majority of the places, there is no arrangement for weighing a dead body. The length of the body should be measured from heel to vertex; a sliding scale with a foot rest will serve the purpose to take the height of a body on the post mortem table, and the height of the main injuries from the heel is to be taken. This procedure sometimes helps one to form an opinion as regards the respective positions of the assailant and assailed if the incident has occurred in a standing position.

Every individual has got his own favourite method of examination and they vary in different groups of cases. I have already said that in medico-legal necropsy it is of utmost importance

for an examiner to have detailed notes of the external examination specially in cases of violent deaths. The time of death should be gauged from the different manifestations namely the rigor mortis, bullae formations, maggots and other signs of decomposition. The cooling of the body has not much bearing here as in the major part of the year the temperature is near about nineties. The natural orifices should first of all be examined for the abnormal discharges present in them or any marks of violence. Bleeding from the ears will indicate injury to the head namely the fracture of the base of the skull or in some cases, though rare, strangulation. Pusy discharges from the ear indicate chronic otorrhoea thereby defective hearing, an important finding in cases of vehicular traffic accidents. Serous or sero-sanguineous discharges of brain matter will indicate gross injury to the base of the brain. The subconjunctival haemorrhage will indicate local trauma or injury in the anterior fossa of the skull and in some diseases. In cases of vehicular traffic accidental deaths apart from noticing the pupils the condition of the lens for cataract should be specially noted which may prove the innocence of the driver. The froth from the nostrils generally indicates decomposition. Thick soapy froth indicates drowning. The vomitus from the nostrils indicates regurgitations when the patient was unconscious.

The Mouth.—Special odour e.g., opium, alcohol, carbolic acid hydrocyanic acid, paraldehyde, chloroform, fruity odours tell their own tales. The teeth in cases of acid poisonings give the characteristic chalky white tint. The position of the tongue in relation to the teeth should be noted. In majority of instances the protrusion of the tongue in between the teeth indicates decomposition. The indentation of the teeth on the tongue without bleeding does not indicate much, but with bleeding it generally indicates pressure in the neck above the larynx as in hanging, rarely in strangulation and sometimes in tetanus, strychnine poisoning and epilepsy. The froth in the mouth, if the body is not decomposed, indicates drowning and snake bites. The discoloration of the mucous membrane—white and corrugated in cases of oxalic acid, hydrag. perchlor (sometimes ashy grey); white and swollen in hydrochloric acid or sulphuric acid diluted; white and partially blackened indicates concentrated sulphuric acid; yellowish coloration of the mucous membrane both of mouth and tongue is the common manifestation of nitric acid; white or ashy grey in carbolic acid. Excessive salivation occurs in some acid poisoning; common in carbolic acid and some mercurial

poisonings but saliva along the chest wall perpendicularly is sometimes seen in cases of hanging. Erected penis is sometimes seen in hanging; seminal discharges may be due to hanging and chloroform poisoning. Rarely bloody exudate is seen from the tip of the penis in hanging. In women in many cases of death by hanging, the mucous membrane of vagina and uterus is found engorged; in some cases actual oozing of blood is noticed. It should be examined for the presence of foreign bodies or the remnants of the products of conception. In highly decomposed bodies the uterus is prolapsed through the vagina. Foetus may be expelled if gravid. If any foreign body is found it should be sent to the chemical examiner, as some abortifacient drugs are used through this passage. In cases of death following rape, extensive injuries may be found in the part in cases of children and in cases where there is suspicion of murder following rape, swabs (with gauze) may be taken for the examination of the semen.

Fæcal matter in the anal margin in fresh bodies indicates violent and painful death namely hanging, strangulation and other tortures. The prolapse of the rectum and of intestine shows that the body is highly decomposed.

Then the general view of the body as a whole should be taken. Shallow colour with wrinkled goose skin of the palm and feet and rinding of the skin is sometimes seen in drowning specially in winter. In asphyxial deaths the body assumes a dusky hue. In strangulation the upper part of the body is of dusky red colour more manifest in the face, neck and the upper part of the chest. The dark dusky hue is common in carbon dioxide, opium, carbolic acid, and snake bite poisonings. In death due to cyanides the face is flushed and the conjunctiva glistening and the body seems to be fresh as if the man is in sleep. In carbon monoxide the picture is nearly the same. In acid poisonings the facial expression is very much contorted and leaves a photograph as it were of the great sufferings he has undergone. In agonising deaths and in deaths in which the cadaveric spasm supervenes, the hands are clenched and sometimes tell their own tales, namely, aquatic plants and weeds in drowning, and weapons in cases of suicides. The punctiform hæmorrhages are sometimes seen in cases of snake bites.

It is better to examine the back for the sagillation and ecchymosis of stab injuries or exit or entrance of gun shot injuries as it causes some inconvenience after the evisceration of the body is done. A knife should always be used to settle the question of

hypostasis and ecchymosis, in which latter case effused clotted blood will be seen. In cases of infants and children the relation of the head should always be examined. The undue mobility of the part should give rise to the suspicion of twisting of the neck. It is needless to say that before the examination is undertaken all limbs should be seen with a view to elicit fractures and injuries in the upper extremities to ward off homicidal attacks.

For the internal examination there is no hard and fast rule but a plan should always be adopted for opening the body as will be manifest from the history and the external examinations. In cases of violent asphyxial deaths the ligature mark of the neck should always be dissected first in order to examine the parchmentization of the skin, laceration of the tissues and ecchymotic blood and fracture of the hyoid and injuries to the larynx and upper part of the wind pipe. In these cases it is best to take out both the lungs with the heart attached to the wind pipe from the base of the tongue for examination as to the fulness of the cavities of the heart and the congestion of the lungs and also for examination of the pleural cavity and the pericardial cavity for any exudation. The larynx, the trachea upto the bifurcation of the bronchus should be slit open for the presence of any foreign bodies as pencil, the seeds of fruits, metallic coins, regurgitated food materials etc. The larynx should be examined for the presence of oedematous conditions of the vocal cords. In cases of death due to injuries of neck by sharp weapon the neck should be dissected with a view to find out any injury to blood vessels of the neck on both sides. The position of the wound with reference to the vocal cords must be properly inspected and a note be kept. This question is of importance when in a Court of Law a medical examiner is asked whether a man could have made a statement or shouted after the infliction of the injury. With a small cut of the nature of a valvular chinck either horizontal or vertical, if the man's head is in a stooping position anteriorly, there is nothing to prevent him from making intelligible and articulate sounds but in cases where there is a gaping transverse wound in the trachea below the vocal cords it is not possible to make any articulate sounds as the air will come out of the wound before it reaches the vocal cords. If the injuries are above the vocal cords the injured man cannot shout but can whisper specially if he attempts to close the gap with his finger or clothing. This point should draw the attention of the examiner and a note must always be kept in cases of the injuries of the neck in front.

In cases of manifest injuries of the thorax or of the abdominal cavity the injured cavity should be handled first. The external chest wall should be palpated for the manifestations of emphysematous crackling due to the compound fracture of the ribs driven inwards or stab injuries or gunshot injuries where the man lived for some time after the infliction of injuries. In cases of gunshot injuries either on the chest or the abdomen the passage of the bullet should be tracked from its entrance to the exit by dissection if possible before any evisceration is done. The effused blood will show the track at the time of dissection. Generally a bullet travels in a straight line unless its velocity is practically gone or unless it is deflected by a bone. In some cases it becomes really difficult to track out the path taken by a bullet if it is lodged in the body. Skiagram or X-Ray will help in these cases but so far as I know there is no arrangement of this in the morgue anywhere in India. In the Continent where this science has developed there are ample facilities available.

In cases of penetrating injuries of the chest wall (stabs etc.) the same procedure should be adopted, and the measurements of the depth thus penetrated should be properly recorded after dissection by passing a probe through the external wound, as the examiner is sometimes shown a weapon and asked his opinion whether such injuries are possible by the weapon shown. It is better to record here that due to the yielding of the tissues in the abdomen and chest wall specially, a deeper injury may be possible with an apparently shorter weapon, because the tissues can yield and recoil back to their original positions. Even the length of an injury may appear smaller than the blade of a penetrating weapon as dagger. This is why it should be insisted to have the weapon examined at the time of necropsy when a weapon has been recovered. There is of course some difficulty in some cases where the weapon is to be examined by the serologist for blood. Where hæmothorax is present the blood should be mopped out beforehand and measured so that the question of additional blood due to dissection and evisceration does not arise.

In vehicular injuries and injuries due to compression of the chest wall, the line of fractures of the ribs should be properly examined and in cases of injury to the lungs their size and position should be recorded. In examining the heart the amount of peri-cardial fluid should be seen and if possible measured. In arsenical poisoning, snake bite and in some cases of strangulation there is good deal of fluid in the sac which is generally sero-sanguineous in nature. In cases where there is a

huge quantity of blood in the pericardial sac or in the chest cavity without any apparent external manifestation of injury, the question of bursting of aneurysm of the arch of aorta and the rupture of the heart either traumatic or otherwise should not be lost sight of. The traumatic rupture of the heart may occur due to the injury of the chest wall without the fractures of the ribs (due to the yielding and recoiling.) It is better under the circumstances to see whether there is effused clotted blood in the chest wall. In these cases the wall of the heart should be examined whether there is any thinning or disease or atheroma present as in rare cases of these conditions there may be spontaneous rupture of the heart itself. In diseased conditions it is generally the left ventricle that yields. In stab injuries of the chest wall where the heart has been injured, the fatality comes after some time if the ventricles are punctured but in cases of auricular injuries the end comes in quick. This question may arise when an injured man is said to have made a statement sometime after the infliction of injury. It should not deter an examiner to answer in the affirmative, in a case of rupture of the heart that it is due to trauma even if there is no other manifestation of injury to the chest wall provided there is history of the injury to the chest wall and provided there is no manifestation of the disease in the heart itself.

Lungs.—A few words about the lungs will not be out of place. I have already said that the hæmothorax in majority of cases is due to the injury of the lungs. A word of caution is necessary here to see whether the hæmothorax is due to the disease of the lungs themselves, *e.g.*, tuberculosis of lungs. The congestion of the lungs is common in many diseases but the pleural ecchymosis is common in violent asphyxial deaths. Sometimes it puzzles a junior examiner to see some part of the lungs anæmic and some parts looking engorged—it is nothing but hypostasis. In cases of drowning the lungs become too full and pops out of the chest cavity when it is opened with the marks of indentations of ribs. Of course the best confirmatory test of drowning, as far as the lungs are concerned is the soapy froth in the finer bronchioles, as the presence of water in the bigger bronchi may occur even after death if the body is submerged in water. If the lungs are in collapsed condition search should be made for the pneumothorax. It is needless to point out that pneumothorax with some amount of hæmothorax may occur in cases without any external marks of injury when the ribs have, due to their fractures, punctured the pleural cavity as well as the lungs, or in the ruptures of the lungs themselves due to disease. Of course it is

not difficult to explain the collapse of the lungs when there are stab injuries of the chest wall. Sometimes in cases of massive pneumonia the lungs become too full and the indentations appear on the pleural surface of the lungs and the sections will show consolidation and will cut like cheese. This differentiates from the lungs in cases of drowning, where the sections when cut are so solid to the feel and when squeezed good deal of water and blood come out.

Abdomen.—The first sign of putrefication appears on the abdomen with greenish spots—generally marked in the inguinal regions or flanks. The tumified and protruberant abdomen in the case of a fresh body gives rise to the suspicion of the rupture of a hollow viscus namely intestine or stomach or peritonitis following injury or disease or rupture of liver or spleen. Emphysematous crackling of the abdominal wall occurs sometimes in injuries where gas gangrene has followed. After opening the abdominal cavity a general inspection should be undertaken. The presence of profuse dark coloured and partially clotted blood indicates most commonly rupture of spleen or of liver. The sero-sanguineous fluid with flakes of lymph indicates peritonitis following traumatic rupture of viscus or some acute poisoning *e.g.* corrosive acids, arsenic, datura, etc., more the presence of flakes, more the adhesions and more the matting of intestines more the time after the infliction of injury or the onset of the disease (peritonitis). The food material free in the peritoneal cavity with an acid smell speaks of the rupture of the stomach. The urinous smell will speak in favour of a rupture of bladder. Faecal matter will be present in a manifest tear of the intestine.

In cases of haemorrhage within the peritoneal cavity, the spleen should be the first organ to be handled very cautiously, after mopping the abdominal cavity. In Bengal the spleen is generally enlarged and it may be assumed that the normal weight of the spleen here is between 8—10 oz. I disagree with Dr. Powell who maintains that the normal weight of spleen is between 4—5 oz. at least not for Bengal. The weight of spleen in cases of rupture of the organ is most important; it should be cautiously detached from its ligaments and weighed. An accurate balance should be one of the commonest equipments of a morgue. The spontaneous rupture of spleen is on record and the defence always tries to take a plea of its occurrence in practically every case of rupture of the spleen. It is needless to emphasise that a search should always be made on the abdominal wall as well as the left side of the chest wall to find a bruise or ecchymosis. If

present it confirms the diagnosis of trauma but its absence does not negative a traumatic rupture due to the yielding and recoiling of both abdominal and chest walls. Of course if multiple homicidal injuries are present as lathi blows in different parts, the opinion is easy. But in cases where spleen is the only organ where the injury is manifest, the opinion becomes difficult. But it must be remembered that the record shows that in cases of the spontaneous rupture of the spleen, the weight of the spleen is many times more its normal weight; so when there is rupture of a spleen of normal weight the diagnosis is easy.

If the haemorrhage is not due to spleen the liver is the next organ to go in for. It should be carefully removed after being detached from its ligaments. The same arguments about the trauma leaving any marks of violence applies to this case also. It is common to find this injury more in vehicular traffic accidents or due to a violent kick by a horse or a man in that region. The normal weight of liver in the male ranges between 40—50 ozs. and in females between 35—45 ozs. in Bengal. In cases of women mention has already been made to examine the uterus or the tube for ectopic gestations when there is good deal of blood in the peritoneal cavity.

(To be continued.)

CASES AND COMMENTS

EXTENSIVE ELECTRIC BURN NOT RESULTING IN FATALITY

Few live to tell the tale of extensive Electric Burns

BY

DINA NATH KOHLI, M.B., B.S.,

Late Chief Medical Officer, Mandi State, Dehra Dun.

A LAD aged 12 years was after a kite on the 2nd roof of a local building on 9th October, 1934.

The building runs from North to South; crossing the roof from East to West is a set of high tension electric wires which are guarded by a wide meshed metallic wire cage of 3 sides free on the top. Immediately below the crossing is an opening of a staircase.

The kite was flying away from East West. The cord was lying on the wires (it was a sunny-day). He caught hold of the wire

of the net with his right hand. The shaking of the net gave sinking movement of the electric wires which attracted him upwards with great force. He then caught hold of the net with his left hand to prevent himself from being bodily dragged upwards to heavens. *He felt something cold dropping on his body.* When charred fully, the patient dropped *with consciousness*; he walked down the stairs to the ground floor, fearing he would be beaten for loitering, by his elder brother; he related to the sweeper that he was burnt who sent for the people. The patient was taken to the hospital where he became absolutely unconscious and remained so for 4 days, then he was taken home. Usual A. G. dressings were applied in the hospital.

At home the patient gained consciousness and was attended to by the experienced surgeon in charge of the Civil Hospital. He had the following injuries on his body:—

The five fingers of the right hand were shrivelled up and completely charred black, the little and the ring fingers were fully flexed, the middle partly flexed, the index finger and the thumb practically straight. The flexed fingers were absolutely senseless to touch but the index and the thumb had false impression of response. The palm of the hand was also charred up but the thenar eminence was still prominent and no bone was exposed. On the 4th day the skin on other parts of the body as described below began to give way and the extent of the wound was visible. On about the same day a line of demarcation appeared around the forearm $2\frac{1}{2}$ " above the wrist.

The injuries were:—

- (1) An extensive wound situated on the front and internal side of the right elbow, 5" from above down and 4" from side to side and $\frac{3}{4}$ " deep, the skin about 2" in its middle remained intact for a long time but sloughed later on and had to be actually cut off with the scissors.
- (2) An extensive wound situated on the front of the right shoulder extending on to the internal side down deep into the axilla exposing the deep arteries and the large nerve trunk, covering an area 4" from above downwards and $3\frac{1}{2}$ " from side to side and about $1\frac{1}{2}$ " deep at the deepest.
- (3) A deep wound situated in the left malar area reaching the side of the nose and the lower eye lid.
- (4) A perforating wound in the pinna of the left ear, the aperture was $\frac{3}{4}$ " $\times$ $\frac{1}{4}$ ".
- (5) A few scratches on the back of the fingers of the left hand.

The wounds bled profusely at the dressing lines and other lines.

The surgeon in charge attending the patient advised amputation straight off at the shoulder. On this the guardians became alarmed and changed treatment.

The next medical attendant advised immediate amputation above the wrist (forearm) where the line of demarcation had just started. Still unsatisfied the writer was called in and the writer pacified the agitated parents that no immediate operation was essential for the safety of the child either at the line of demarcation or at the shoulder joint for the following reasons:—

- (1) There was no putrefaction of the parts.
- (2) The patient felt that he had the sense of touch still left in the thumb and the index finger.
- (3) The condition of the patient was delicate on account probably of the shock or bleeding and further operation would add to loss of blood, shock and mental depression due to immediate drop-in-hope of saving the arm.
- (4) The line of demarcation was not well developed and it appeared to be drawn upwards so that one could not judge how far and where to cut the bones of the forearm.
- (5) The covering flaps at both the sites could not be well adopted to cover the stumps.
- (6) The extent of the damage to the tissues was not certain.
- (7) The patient used to get strange asphyxial attacks two to three times a day, so further chloroforming was not safe.

The writer had therefore and otherwise too, the confidence of the patient and the guardians and they preferred to allow "wait and see" policy to be safely followed.

The parts were duly dressed antiseptically for over a month and a half, the wounds fairly progressed to healing and were all healed up in another week. After a month and a half the line of demarcation had fairly gone down to the tissues and the skin also progressed down to the stump; the patient was tired of keeping the dried limb as a useless burden and was prepared to part with the limb most willingly. The distal operation at the forearm was only a simple snipping of the bones affair with the sheaths $\frac{1}{2}$ " above the tissues. During the last week the wound was automatically covered up completely leaving no sinus and most of the forearm was saved, the only deformity that followed being loss of the hand and ectropion of the left lower lid.

A CASE OF MULTILOCULAR CYST OF THE OVARY IN A GIRL OF 6 YEARS

BY

B. KAMALA AMMAL, M.B., B.S.

W. Hospital, Kottayam

Patient.—A., aged 6, unmarried. Indian Christian by caste. Belonging to the poor working class. Admitted on 28th June 1935, to D. H. Kottayam for bleeding P. V. for the last one month and distension of the abdomen.

Previous History.—Only that of otorrhœa from birth and a certain amount of deafness.

Family History.—Nothing special.

Present illness.—The girl had a fall (from 2 ft. height) about 3 months ago, since then the parents noticed a slow but steady distension of the abdomen. The breasts were also getting enlarged a few months even before the accident, so that suspicion of pregnancy was talked of by the neighbours. Since the last 35 days the girl was having bleeding P. V. occasionally passing even clot and it was mainly for this that they sought hospital aid.

Physical Examination.—Patient looked about 6 years, rather well nourished. Milk teeth present. Liver and spleen not palpable. Circulatory and Respiratory systems normal. Urinary—nil abnormal. Abdomen very much distended with a uniformly rounded cystic swelling almost in the middle line, rising from the pelvis to a level of 2 inches above the umbilicus. The tumor was freely movable and could be pushed up above the pelvic brim and the fingers dipped in between, there being some resistance on the right side.

The external genitalia.—infantile.

Hymen.—intact. Rectal Examination revealed a small cervix and uterus which moved independent of the tumor.

The breasts were enlarged to the size of a big lime with dark areola but contained no fluid.

The case was diagnosed as one of Ovarian Cyst. (Right) and operated upon, on 4th June. Laparotomy was performed under chloroform and a multilocular cyst of the ovary was removed. The cyst contained about 7 pints of clear serous fluid. The uterus was slightly enlarged for the age; the left tube and ovary were quite healthy. The abdomen was closed up.

The patient had an uneventful recovery and was discharged from hospital on the 21st day. The breasts had almost reduced to normal and the girl got back her infantile appearance before she left the hospital on the 21st day.

AUG. '36]

A CASE OF MALARIA—P. K. MODY

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It is interesting to note in this case that the tumor was non-malignant and cystic while one would think of a sarcoma as probable for her age (before puberty). We also observe that even in a child of six years the stimulation (or irritation) of the ovary may produce all the external signs of pregnancy.

My thanks are due to the Medical Officer in charge, Dr. D. W. Isaac, for permitting me to publish this case.

A CASE OF MALARIA COMPLICATED WITH BACILLUS COLI INFECTION

BY

P. K. MODY, L.C.P.S., (BOM.)

Medical Officer, Sardargadh, (Kathiawar.)

A MOHAMADAN Musa N. aged 40, business-man, stout in body came to the out-door for vague pains in the loins, head-ache, constipation and anorexia. He had furred tongue and in the hurry of the ordinary out-patient he was disposed off with a saline purge and a bitter stomachic mixture.

Two days later I was called upon to see the same patient when he had severe rigors, vomiting and hyperpyrexia to 106° F. Before proceeding to examine him, I first thought of controlling the fever and sponged him with cold water and applied ice wrapped in towels over the head. The temperature came down to 103° F. after which the physical findings were as under:—

Heart: Normal; *Lungs:* Normal; *Abdomen:* Soft to palpation; *Spleen:* Two fingers below the costal arch and tender on palpation; *Liver:* Just palpable and tender; *Bowels:* Constipated and tongue moist and coated.

I left the patient after giving an alkaline Diaphoretic such as Pot. Citras and Liq. Ammonia Acetate. I saw the patient next morning when he had 104° F. temperature and the whole night the temperature ranged from 102° F to 104° F. The patient was moreover vomiting every now and then.

As the fever was with severe rigors and the vomiting of bilious type, I thought of giving quinine and he was put on ordinary alkaline mixture followed by quinine sulph. gr. 30 in a day. Unfortunately the patient could retain nothing in the stomach and in the evening of the same day, I injected quinine Bi Hydrochlor gr. x intragluteally and prescribed the following mixture for vomiting:—

℞ Acid. Hyd. dil. ... miv.
 Pot. Bi. Carbonate ... gr. xx.
 Sp. Am. Aro. ... m. xv.
 Liq. Bismuth ... m. xv.
 Aqua Chloroform ... oz. i.

Fiat Mist. 3 every three hourly.

On the third day of the illness the patient again got rigors and the temperature shot upto 105° F. and ranged between 102° to 104° F. the whole day without intermission, inspite of sponging and application of ice to the head. The vomiting was to some extent checked though not completely and I started once more with quinine but the patient could not retain quinine and the attempt was fruitless. The day following it I injected again quinine Bi. Hyd. gr. x intragluteally and put the patient on Atebrin 1 tablet three times a day for five days together with an ordinary diaphoretic mixture. With the administration of Atebrin the patient's temperature came down to 100° F. and I thought a course of Plasmoguin and quinine would bring the illness round. Hence:—

Plasmoguin ... 1 tablet
 Quinine sulph. ... gr. v. Fiat capsule 1

three times a day was continued for five days more but the temperature remained between 100° F. to 101° F.

The patient was given two injections intragluteally, of quinine Bi Hydr. gr. x each. Over and above that he was given a course of Atebrin and Plasmoguin with quinine accompanied by ordinary diaphoretic mixture. The bowels were opened frequently by purgatives and enemas. In spite of all these, the temperature did not come below 100° F.

It was now that I thought of revising my diagnosis of Malaria even though I had no laboratory help at hand. In physical examination I found nothing more than what I had on the first day but while proceeding with an ordinary routine examination of urine, I found a peculiar fishy odour coming from the conical glass containing urine and at the bottom there was a deposit of pus. I thought of the possibility of Bacillus Coli infection running beside the ordinary malarial infection. On the same day I changed the line of treatment and put the patient on full doses of Alkalies—Potassium Citras and Sodium Bicarb—till urine remained alkaline for three or four days. Side by side the following cachets were given twice a day between meals:—

Salol ... gr. x
 Hyd. Cum. Creta ... gr. ½ b. d.

The patient was also put on Caprokol capsules 1 t. d. s. and two injections of Collosal Argentum 1 c.c. were given on alternate days. The patient touched normal on the eighteenth day of his illness and thenceforth he had no fever and the rest of the recovery was uneventful.

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EDITORIAL

HON. PHYSICIANS AND SURGEONS

THIS vexed subject has come up again to the forefront by the indiscreet action on the part of the authorities concerned in serving 'notice to quit' order, recently on two Hony. Asst. Medical Officers working in the Ear, Nose and Throat Department of the General Hospital, Madras. No reason has been assigned, no fault has been found, no charge has been framed and no explanation has been obtained, before taking this drastic step—so we are told. This raises two very grave questions: first, with regard to the stability of the Hony. appointments and next, with regard to the prestige of the Hony. Officers. According to the rules in force, 'Honorary Medical Officers shall cease to hold Office on completion of their sixtieth year of age'. As age connotes experience, it is clear that only men of ripe experience are needed for the post of Honoraries. While so, we fail to see why the services of these two Honorary Officers who have put in nearly seven years service, should be abruptly terminated. If service and experience do not count, then there must be something else lacking, say, efficiency. Have these Honorary Officers been found to be inefficient? Have they been found fault with at any time? Have they had any previous warning? In the absence of any blot or blemish, it must be presumed they are good enough for the posts. Then, why send them away? Are the Honorary Officers to be the victims of the whims and caprices of the superior officers in Government employ? If their tenure of office has been limited to a certain period so that they may automatically retire after that time, in order to make room for new

incumbents, there is some meaning in the action taken. But that is not so. New men must wait for vacancies to arise, either by the promotion of the permanent incumbent to a higher grade, or his resignation or by his taking long leave and the like. If these men have been sent out with a view to provide for others, then the procedure is unjust and arbitrary and no medical man worth his salt, would accept honorary post under such conditions hereafter.

There is no gainsaying the fact that the medical officer's prestige is lowered, as the public will always connect his dismissal with some fault or inefficiency. His practice thus suffers. If this is the reward for hard, honest, honorary work, then the independent medical profession must think twice before accepting honorary jobs. The object of the honorary scheme is to put honorary officers in entire and independent charge of hospitals and dispensaries, and thus minimize the cost under medical establishment and utilize the savings to extend medical relief to the masses. From the last budget-speech of the Hon'ble The Minister for Medicine and Public Health, on a cut motion, we gather that the Government appears to move in the matter with abundant caution. The Hon'ble The Minister said on that occasion:—

“The Government have come to the conclusion that the time is not yet ripe for putting honorary officers in entire and independent charge of hospitals and dispensaries. The system has been under trial only for a short time and it will not yet be safe to go to the extent of taking such a forward step. If the present policy of the Government is continued and extended, the time will soon come when there will be considerable savings which can be utilized for the better equipment of hospitals and the construction of more hospitals and dispensaries”.

From the practical working of the scheme, we are constrained to remark that all is not well with it and unless the Minister mends matters early, the scheme is bound to fail.

The Late Lt. Col. R. Knowles, C.I.E., I.M.S.,

WE regret very much to record the death of Lt. Col. R. Knowles, C.I.E., M.R.C.S., L.R.C.P., I.M.S., Officiating Director of the Calcutta School of Tropical Medicine, at the Tropical Diseases Hospital, Calcutta, on the morning of 3rd August 1936, of heart failure, following gastric haemorrhage. It was just a year ago that the

Calcutta School of Tropical Medicine had lost one of its world-famous Directors in the person of Lt. Col. H. S. Acton, I.M.S. and it is most unfortunate that the School should suffer another great loss within such a short interval of an equally world-famous Director in the person of Lt. Col. R. Knowles. It is a strange coincidence and an irony of fate, that while in active life, Knowles always succeeded Acton, he should have followed Acton even to the grave, both of them leaving the Calcutta School of Tropical Medicine all the poorer by their untimely demise.

Lt. Col. Knowles was born in 1883, the same year in which Col. Acton was born and was educated at Cambridge and London. He entered the Indian Medical Service in 1908 and served with the Indian Expeditionary Force “D” at Mesopotamia during 1914-15. He was Director of the Pasteur Institute, Shillong, during 1916-1920. He was connected with the Calcutta School of Tropical Medicine from 1920 until his death. He was Editor of the Indian Medical Gazette during 1928-33. We may here recall a significant instance in which the late Col. Knowles had the boldness to support our Editor, the Hon'ble Dr. U. Rama Rau's second Bill, introduced in the Council of State, for the establishment of an All-India Medical Council, thereby revealing his liberal outlook and democratic bent of mind. His words, though oft-quoted in the pages of the Antiseptic, are worth repeating on this solemn occasion, for, he was one of the very few I.M.S. Officers who wanted to do away with the pernicious caste distinction among medical men and give the poor L. M. P. a seat in the Indian Medical Council. In his editorial of March 1930, in the Indian Medical Gazette, he observed:—

“On a study of Dr. U. Rama Rau's Bill, our opinion is that it appears to meet the present conditions admirably. It meets the Indian demand for self-government in medical affairs by the creation of an All India body of democratic constitution to whom the General Medical Council of Great Britain may be expected to entrust the duties of the supervision of medical education and inspection of examinations; whilst it does away with the necessity for an Official Commissioner of Medical education appointed *ad hoc*, without consulting General Medical professional opinion in India..... In brief, the Bill attempts a sort of federal solution of the present problem which would leave the power of existing Provincial Councils untouched, but yet introduce a Central and Co-ordinating mechanism which would give India

combined representation with regard to world problems of Medical education and registration."

After the death of Col. Acton, in August '35, he was made the Officiating Director of the Calcutta School of Tropical Medicine. His scientific contributions are many, of which those on Malaria, Snake-bite, Kala-Aazar and Medical Protozoology are of outstanding merit. His book entitled, "An Essay-Review of the Calcutta School of Tropical Medicine—1920-1933", published in 1934, is a masterpiece and is a permanent record of reference of the activities of the Calcutta School of Medicine since its birth. It may be said without fear of exaggeration that he had done yeoman service to the cause of "Tropical Medicine." While writing the obituary note on Lt. Col. Acton last year in the "Antiseptic, we observed:—

"Cols. Acton and Knowles thenceforth came to be recognized 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".

The cruel hand of Death had snatched away one star in August last year and the other in August this year and thereby enveloped the tropical medical world in darkness and sorrow.

We offer our sincere condolences to the members of the deceased's family in their bereavement.

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

Treatment of Auricular Fibrillation.—The key to the treatment of auricular fibrillation is the proper use of a potent preparation of digitalis. Quinidine plays its role in a select few only. The details of management of heart failure are so familiar that details regarding rest, position, diet, sedatives *et cetera*, may be omitted, but some consideration must be given to the use of diuretics in heart failure

In brief, digitalis has three main actions: (i) An indirect vagal effect influencing the sino-auricular and the auriculo-ventricular node. It increases vagal inhibition and thus slows the heart and tends to produce heart block. (ii) A direct effect on the heart

muscle independent of vagal action. This is only a small effect. (iii) Some uncertain degree of effect on tone.

In normal rhythm the slowing effect of digitalis is inconsiderable, amounting to six to ten beats per minute. In fibrillation the effect is great, because the degree of heart block induced is quite sufficient to prevent the passage of the feeble impulses generated from the circus movement in the auricle. It is thus easy to slow the ventricle, lessening the work, allowing better filling and a stronger output of blood. A vicious circle is replaced by a favourable one and improvement occurs. Digitalis does not affect the fibrillating auricle. We speak loosely of slowing the fibrillation, really meaning that we slow the ventricle rate by imposing a grade of heart block. Any good preparation of digitalis will do this, the most stable is the powdered digitalis leaf; next is the tincture, and lastly the infusion. The glucosidal principles are active and stable, and rather expensive. The preparations are hydrolysed by water and gradually become inert. For this reason it is not good practice to prescribe digitalis in a mixture. It should be given separately, either as drops with or without other inert flavouring tinctures, or, if desired, as tablets, pills or crystalline digitalin. Hypodermic injections cause irritation and are not well absorbed. For very rapid action intravenous injections may be required occasionally, but here strophanthin is even more potent. Digoxin prepared from *Digitalis lanata* is an excellent preparation when given either by the mouth or intravenously.

The principles of digitalis administration in auricular fibrillation are: (i) to reduce the ventricular rate to 70 to 80 per minute, (ii) to maintain it at this speed indefinitely, (iii) to avoid toxic effects.

If the heart failure is not severe and there is no urgency, give four cubic centimetres (one drachm) of the tincture daily, or 0.18 gramme (three grains) of the powdered leaf or some equivalent dose of other preparation. Continue administration till the desired effect is obtained or till the toxic effects appear (in about five to seven days), then reduce to a maintenance dose, which is usually 1.2 cubic centimetres (twenty minims) of tincture or a grain of the leaf daily or on alternate days.

The heart must be digitalised for the remainder of life, which may extend for ten years or so. The mistake is often made of omitting the digitalis after the patient is relieved of heart failure; in about a fortnight the condition is again as bad as ever. Established fibrillation means digitalis for life, which should not

be looked on as a punishment, but rather as a veritable elixir of life.

Warn patients that vomiting and headache may be expected and should be reported promptly. Otherwise mistaken ideas arise that they have been overdosed and poisoned, and they may refuse to continue treatment. A preparation in large doses which will not produce vomiting is inert and should be discarded. As soon as nausea and vomiting appear, suspend treatment for twenty-four to forty-eight hours and proceed with lessened dosage. Be sure that the vomiting is not the result of heart failure itself, which will need digitalis for relief. Digitalis vomiting and headache may be relieved by a hypodermic injection of 0.65 milligramme (one one-hundredth of a grain) of atropine. In urgent cases of heart failure, when the ventricle is beating very irregularly at high speeds and dyspnoea is pronounced, then the method of the massive dose should be used. This aims at rapid digitalisation of the heart in a few hours.

An adult may receive 12 cubic centimetres (three drachms) of tincture in twenty-four hours. Naturally heroic dosage needs watching, and the heart rate, not the pulse rate, must be carefully checked.

Once full digitalisation is achieved small maintenance doses will be sufficient. For extremely urgent cases, in which it is imperative to slow the fibrillating heart in a few hours, the treatment of choice is either an intravenous injection of digoxin (0.5 milligramme) or an intravenous injection of strophanthin (0.56 milligramme or one one-hundred-and-twenty-fifth of a grain). Either may be repeated in from four to six hours. Do not, however, inject strophanthin if much digitalis has been recently administered. The combined effect may seriously poison the heart muscle and may be fatal.

If coupled beats appear with administration of digitalis, be warned and cease the medicine till they disappear, and then proceed with smaller doses.

Many patients can be instructed in the intelligent use of digitalis, just as they may with insulin. Regulation of the dosage is easy once the heart is under control.

Preparations of strophanthin are not reliable for oral administration. In the rare case of intolerance for digitalis use digoxin; it is less toxic and is absorbed rapidly.

Quinidine Treatment.—If a patient is doing badly with digitalis, it is wrong to assume that quinidine is interchangeable with digitalis. Quinidine acts mainly on the auricular muscle,

and the objective aims at ending the fibrillation and thus restoring normal rhythm.

It does this by prolonging the refractory period of the auricle and thus the circulating wave is brought up against refractory fibres and fails to be transmitted. The circus movement ceases and the normal pacemaker, the sino-auricular node, again assumes control of rhythm.

But it can be relied on to do so only in some 50 to 60 per cent. of cases, because it has other actions akin to atropine. It may lower the conduction time in the auricle; this slows the fibrillary rate, but it allows more time for the refractory period to lift and thus permits re-entry of the circulating wave and perpetuates the fibrillation. It is a question which factor predominates, the effect on the refractory period or the effect on the auricular conduction.

The best cases for quinidine treatment are: (i) paroxysmal cases, (ii) recently established fibrillation; (iii) those without gross signs of organic disease and with good cardiac reserve; (iv) after thyroidectomy operations for toxic goitre.

Contraindications are found conversely in those patients: (i) with old-standing fibrillation; (ii) with gross organic disease, as in old-standing mitral stenosis; (iii) with heart failure; (iv) with recent cardiac hæmoptysis; (v) with embolic lesions; (vi) with active infection.

Remember also that even if normal rhythm is restored, the underlying pathological change still exists, so that fibrillation may recur. This is only a relative bar, because the course may be repeated and also persistent administration may avert recurrence. The chief danger from the use of quinidine comes, paradoxically, from its success. When normal auricular contractions result, thrombi may be detached and swept into the circulation, causing embolism. The risk is not great, but unpredictable, and acts as a decided deterrent to the use of this drug.

Tolerance for quinidine varies: nausea, vomiting and diarrhoea, headache, faintness and precordial discomfort may occur. If its use is decided on, a test dose of 0.18 gramme (three grains) is given. If there are no untoward symptoms or signs, my practice is to give the same dose each four hours for forty-eight hours. If unsuccessful, I give the dose every two hours for six doses. If there is no result, raise the dose to 0.36 gramme (six grains) at intervals of four hours and, if necessary, for intervals of two hours for six doses. Occasionally I have used 0.48 gramme (eight grains) per dose. The heart rate and rhythm are watched carefully.

If normal rhythm be restored, the doses are spaced out to six and eight hour intervals for several days and then discontinued. Needless to say, the patient should be in bed and should remain there for a week after normal rhythm returns.

Diuretics.—When oedema is associated with auricular fibrillation, it may be relieved by rest and digitalis alone. If not, diuretics are necessary, such as theobromine sodium salicylate ("Diuretin") in doses of 0.6 to 1.2 grammes (ten to twenty grains) three times a day, or theocin sodium acetate, 0.3 to 0.6 gramme (five to ten grains), three times a day. Both are inclined to produce nausea, especially theocin, although it is the more active of the two.

Nowadays, however, one relies on the synthetic mercury acetate compounds, which are excellent and non-toxic as a rule. They are represented by "Salyrgan," "Neptal" and other proprietary names. The action is enhanced by a short preliminary course of ammonium chloride or ntrate, for example, 1.2 grammes (twenty grains) in mixture three times a day for two days. Then give intramuscularly one or two cubic centimetres of the mercury preparation and repeat at four-day intervals till the oedema has disappeared. After this keep the oedema at bay by occasional infections at the first reappearance of dropsy and do not wait until it is marked. In this way I have seen patients kept comfortable for three or four years. These compounds are relatively non-toxic and may be used even in cardio-renal failure, but obviously, when the kidneys are seriously degenerated, the result will be less good than in uncomplicated cardiac failure.

One other point in the treatment of heart failure is to make use of morphine for insomnia and paroxysmal dyspnoea if the barbiturates or other sedatives fail. Rest and sleep are essential. It is not unusual in cardio-renal failure for hypnotics to cause excitement and mental confusion rather than sedation. Sometimes a combination of morphine and a barbiturate overcomes this.—*Silberberg: Medical Journal of Australia. Jan. 25, 1936, p. 120. —Thr' Medical World.*

Treatment of Uncontrollable Hiccup.—Uncontrollable singultus, the extremely tormenting and also dangerous disorder, which occurs occasionally as a post-operative complication, was discussed by Dr. H. Korbl at one of the recent sessions of the Vienna Surgical Society. He presented a patient who, on the third day after a cholecystectomy, developed an uncontrollable singultus. It was assumed that pressure of the retractor on the diaphragm during the operation had precipitated the disorder. An endeavour

was made to control the singultus by the induction of vomiting, by sneezing, by stomach lavage, by the induction with drugs of sleep, by pressure on the diaphragm, and by bilateral blocking of the phrenic nerve, but without result. As the condition had lasted 10 days and the ingestion of food was prevented by uninterrupted hiccup, infusions of a mixture of sugar and sodium chloride were given. On the basis of the observation that carbon dioxide has a stimulating effect on the respiratory centre during inspiration and produces normal rhythmic contractions of the diaphragm, an attempt was made to overcome the impulse toward abnormal contractions of the diaphragm by allowing the patient to breathe carbon dioxide. The effect was good. The singultus ceased with the first inspirations—at first for a short time, and then, on repeated application of the carbon dioxide, for increasingly long periods, so that the patient could eat and sleep. After four days the singultus had completely disappeared.

During the discussion that followed the demonstration the good effects of this treatment were confirmed by Lotheissen and by Starlinger. It is true that good results may be secured by medicinal treatment: for example, the administration of from ten to fifteen drops of a 10 per cent. alcoholic solution of menthol in water, several times a day. It appears, however, that the carbon dioxide procedure, which was proposed by Sheldon in America in 1928, has never gained wide publicity in this country: otherwise well known surgeons would not have seen fit to divide the phrenic nerve or to remove the fourth to the sixth cervical roots. Carbon dioxide had been administered to this patient after the operation but that did not prevent the appearance of the singultus after several days.—*J.A.M.A., Nov. 9, 1935, p. 1536. —Thr' Medical World.*

Treatment of Diabetic Coma—By R. D. Lawrence, M.D., F.R.C.P.—In this insulin era diabetic coma is becoming a rare condition and theoretically should never occur. Impending coma should lead to diagnosis and treatment with insulin in the early precomatose condition, when a dangerous outcome can be easily averted by adequate treatment. When full diabetic coma has developed, either through the negligence or ignorance of the patient or relatives or through the lack of immediate action by the doctor, a fatal condition may occasionally develop. But diabetic coma as a cause of death should have disappeared by now.

Diagnosis.—The differentiation between diabetic and other comas is easy if the rule of a routine test of urine—obtained by

catheter if necessary—is not omitted in all severely ill and unconscious patients. Albuminuria is always present in diabetic coma, and its finding should never be allowed to suggest a renal condition until the urine has been examined for sugar and acetone. The diagnosis will be suggested by history of progressive thirst, wasting, and weakness; by ensuing vomiting or abdominal colic; by air hunger with a smell of acetone in the breath; and by slow drowsiness leading to coma. Confusion may most easily arise in known insulin cases between true diabetic coma (ketone intoxication) and unconsciousness from an overdose of insulin (hypoglycaemic coma). The former may occur in an insulin case either from total omission of insulin or from irregularity in treatment or incidental infections. It may be very difficult for a doctor suddenly called to such a case to decide between the unconsciousness of true diabetic coma and insulin coma, and I have seen some patients lose their lives through the wrong treatment being given.

The main clinical differences are contrasted in Table I.

Table I

	Diabetic Coma.	Insulin Coma.
Onset	Gradual.	Very sudden.
Tongue	Dry	Moist.
Respiration	Deep; air hunger	Quiet.
	Acetone in breath.	None.
Skin	Dry; blue colour.	Sweating common.
Dehydration	Marked.	Absent.
Pulse	Rapid; feeble.	Normal; bounding.
Blood pressure	Low	Normal.
Eye tension	Usually low	"
Nervous system	No pathognomonic signs.	Convulsions frequent.
Chemical tests:		
Urine sugar	+++	Nil or trace.
Ketones	+++	"
Albumin	Very common.	Very rare.
Blood sugar	Very high.	Very low.

It should be remembered that in insulin coma some sugar may be found in the first catheter specimen, because this was secreted into the bladder perhaps some hours before, when the blood sugar was high. But the next sample obtained from the indwelling catheter will be sugar-free. If any doubt remains about diagnosis, an unconscious diabetic should be immediately treated with sugar (1 oz.) for hypoglycaemia. This should abolish the insulin coma within fifteen minutes, will do little if any harm to the diabetic coma, and gives time to think and decide on further treatment.

Coma and Precomatose Conditions.—Diabetic coma is due to the poisons of disordered fat metabolism (the acetone or ketone bodies) which accumulate in severe diabetes whenever insufficient sugar (glucose) is being metabolized. The treatment therefore

consists in burning large amounts of sugar by large and repeated injections of insulin, the sugar being given to provide fuel for the insulin and to prevent hypoglycaemia. Besides this it is necessary to treat the dehydration and circulatory collapse which is usually present, because if the latter is severe the patient may die before and in spite of the removal of the ketosis by insulin. The treatment of collapsed and profoundly comatose patients usually demands prolonged and difficult treatment (intravenous saline, etc.) which can hardly be carried out in the patient's home, and I would advise doctors to send such cases at once to an efficient hospital after a large intravenous injection of insulin (40-50 units). Precomatose cases (indeed the condition should never be allowed to go beyond this stage) that can swallow and retain sugar and fluids can be easily treated at home by the following simple method (Table II).

Table II

Diet and Insulin Control by Urine Tests *		
Diet.	Carbohydrate, 40 grams : By day, 4-hourly. By night, 4-hourly.	The following contain 10 grams of carbohydrate : Sugar ... 2 large lumps or 2 teaspoonfuls. Glucose ... $\frac{1}{2}$ oz. or 2 full teaspoonfuls. Benger's ... 2 level teaspoonfuls. Horlick's ... 2 heaped teaspoonfuls. Ovaltine ... 2 very full teaspoonfuls. Orange juice. 4 oz. Milk ... 7 oz. Give water between feeds.
Insulin.	Test urine for sugar before each dose (catheter if necessary). Give At Units 4 hourly 6 p. m. 40 if Benedict's test is red or yellow = +++ sugar. 10 p. m. 30 if green with copper deposit = trace. 2 a. m. etc. 20 if blue ... = no sugar.	

Date.	Time.	Urine Sugar.	Ketones.		Insulin.	Carbohydrates.
			Fe Cl	Rothera.		
21/3/32	6 p.m.	+++	+++	+++	40	40 grams (40 gm. glucose + lemon juice)
22/3/32	10 p.m.	+++	+++	+++	40	" "
	2 a.m.	+++	++	+++	40	40 gm. (8 teaspoonfuls Benger's)
	6 a.m.	+++	0	+++	40	" "
	10 a.m.	Trace.	0	++	30	" "
	2 p.m.	0	0	+	20	" "
23/3/32	6 p.m.	Trace.	0	0	30	" "
	10 p.m.	Trace.	0	0	30	" "
	2 a.m.	0	0	0	0	0
	6 a.m.	+	0	0	30	40 grams (8 teaspoonfuls Benger's)

Patient is then put on 120 grams carbohydrate + insulin 40 units twice daily.

* The figures in italics may vary with the requirements of each case.

Carbohydrate and Insulin Treatment.—If vomiting has been present and is likely to recur, washing out the stomach may stop it entirely and should be carried out. Regular amounts of carbohydrate are given by mouth every four hours (chosen from the foods shown in Table II), and the insulin is started with 40 units intravenously and continued four-hourly. The urine is tested every four hours, and the dose of insulin varies with the degree of glycosuria. Forty units are prescribed for heavy sugar, 30 for moderate sugar, and 20 or 10 units for no sugar. In this way the patient is supplied with adequate amounts of sugar and insulin but is safeguarded from hypoglycæmia. The choice of what carbohydrate to give, the urine testing, and insulin dosage can be carried out by an efficient nurse. Abundance of fluid should be taken by mouth.

This treatment usually removes all ketosis in twenty-four to thirty-six hours, and a change can then be made to three or two doses of insulin a day. The patient may remain drowsy for many hours after the ketosis is lessening, and if the pulse is good no alarm need be felt.

General Treatment.—Apply warmth and complete rest, as in all cases of collapse. Circulatory stimulants are usually indicated: strychnine, 1/100 grain; coramine, 1-2 c.c.m.; caffeine, 3 grains; adrenaline, 3 minims—subcutaneous and repeated. Bicarbonate of soda is not essential, but hastens the removal of the acidosis (2 drachms four-hourly up to 1 oz. in total). The bowels should be opened by aperient or enema, but drastic purgatives may cause collapse. Sepsis and toxæmias, often the cause of the coma, must be sought for and treated.

Dehydration and Circulatory Collapse.—Some patients may be seen for the first time in profound coma, with intense dehydration and circulatory collapse, a rapid and almost imperceptible pulse, and a blood pressure under 70 mm. Hg. These require insulin and sugar treatment as above, but still more fluids to restore the body fluid lost by polyuria and vomiting. In such cases large amounts of intravenous normal saline are immediately necessary. One or two pints is not enough, and frequently three to six pints must be given slowly over one to two hours' infusion to restore the circulation. Such infusions should be continued in whatever amounts are necessary to restore the eye tension and bring the blood pressure over 100 mm. Hg. The best procedure is to give these large amounts of intravenous saline at first and to continue them later with added 5 per cent. glucose by continuous drip infusion into a vein. This may be necessary for twenty-four

to forty-eight hours to resuscitate profoundly collapsed cases, and it is obvious that such treatment can be performed only under hospital conditions. Fluids, glucose, insulin, and any necessary stimulants (adrenaline, 2 to 3 minims) can be given in the continuous intravenous infusion. If circumstances are such that intravenous therapy is impossibly difficult, rectal normal saline or 5 per cent. glucose can be administered (remember that their retention is doubtful); or, better, normal saline with 5 per cent. glucose subcutaneously in the breasts or axillae.

Difficulties in Desperate cases.—A not infrequent complication is oliguria or even anuria when the blood pressure is extremely low or dehydration extreme. Urine is usually present in large amounts in the bladder when the patient is first seen, but after this may become so scanty as to be insufficient for tests to regulate the insulin dosage. In such cases some 40 grams of carbohydrate and 20 units of insulin should be administered four-hourly, unless blood-sugar control is to hand. In such cases blood tests may show that the insulin is not reducing the blood sugar, and one may be tempted to prescribe much larger doses—100 to 200 units or more. I am doubtful if these large doses are of greater value, the failure to act being due to the poor circulation and the failure of tissues under such conditions to perform any metabolic exchanges rather than to an insufficiency of injected insulin. If enormous doses have been injected and recovery results hypoglycæmia must be watched for later. It is almost certain that the absolute level of the blood sugar does not matter and that sufficient insulin and glucose will always bring about recovery if circulatory collapse can be averted.

The treatment of diabetic coma can be thus summarized: (1) Treat the ketosis with repeated and large doses of insulin and sugar to balance it. (2) Correct dehydration and prevent circulatory collapse by abundance of fluids.—B. M. J.

Surgery

Talma's Operation for Ascites.—According to O. HENNINGSEN (*Bruns' Beitr. z. klin. Chir.*, March 4th, 1936, p. 229) Talma's operation of suture of the omentum to the abdominal wall may be of considerable benefit (and therefore should be remembered) in prevention of ascites in cirrhosis of the liver, but it is useless in that due to heart disease. It should be performed under local anaesthesia, through a small median incision: when the spleen is enlarged it should at the same time

be sewn to a portion of the omentum. Talma's operation finds its scope in comparatively early cases in which jaundice and cholaemia have not appeared; not manyappings should have been performed, and cases in which rectal or oesophageal bleedings are present but ascites has not occurred are specially suitable. Seventeen cases are described; death speedily followed operation in five out of six of the deeply jaundiced patients. Five non-icteric and early cases gave good results, including two survivals of eight and ten years' duration respectively.—*B.M.J.*

Removal of facial Moles and Warts.—The use of trichloroacetic acid to produce local anaesthesia before the electrical removal of moles and warts is advocated by R. R. M. McLaughlin (*New York State Journal of Medicine*, March 1, 1936, xxxvi, 347), who claims that the local injection of novocaine or other anaesthetics on many areas of the face is quite painful and produces a distortion of the operation field. The method used is as follows: If there is much hyperkeratosis the surface of the lesion is shaved down with a knife, scissors, or even a curette. The acid is then applied full strength to the surface of the lesion, using a toothpick or other suitable applicator. Care should be taken to avoid spilling the acid on to the surrounding skin. This may be prevented by ringing the lesion with vaseline. Even if a small amount does spill it may be neutralized readily with a bicarbonate of soda paste or with an ordinary calamine and zinc lotion. Any bleeding which may occur following shaving will be controlled by the action of the acid. After a minute or two, when the painted area becomes thoroughly whitened, it will be found that a degree of analgesia has developed, which, in most instances, is sufficient to permit light, interrupted desiccation, with the Oudin current. It is claimed that by this method the cosmetic results are very satisfactory.—*Practitioner.*

Painful Mammas.—G. Cotte and G. Pallot (*Gynecol. et Obstet.*, February, 1936, p. 113) discuss the premenstrual mammary pains which occur in some women without evident pathological changes. They believe that these pains are due merely to an exaggerated physiological process. Inflammation is not an aetiological factor, and the pain is caused by a hyperplasia or secretory phenomenon due to a disturbed secretion of the ovarian hormones. Either hyperfolliculinaemia or hyperluteinaemia is present. In the former case hyperplasia occurs in the galactophorous tubules, in the latter in the glandular alveoli, this being

accompanied by epithelial desquamation. These syndromes can result from a hypofolliculinaemia or hypoluteinaemia, these endocrine disturbances being governed at the same time by functional troubles of the anterior pituitary lobe. Experiments have shown that folliculin and the hormone of the corpus luteum possess antagonistic actions, and the latter acts on the breast only when associated with small amounts of the former. The most frequent cause of painful mammae is increased activity of the luteinic hormone, and such cases are almost always relieved, if not cured, by administering folliculin. The authors give 10 to 15 minims of a folliculin preparation twice daily for the fifteen pre-menstrual days; if the patients are not relieved, this dose may be increased. If, however, the pains are due to hyperplasia of the galactophorous tubules, injections of the corpus luteum hormone should be given. Repeated attacks of these pains may eventually bring about lesions in the glandular parenchyma, which may lead to such conditions as nodular mastitis and adenofibromatosis. The authors suggest that these affections may be only different stages of the same process, which is related to disturbances of the secretion of the genital hormones.—*A. M. J.*

Carcinoma of the Tongue in the New-born.—L. W. Frank, C. D. Enfield, and A. J. Miller have described a papillary squamous-celled carcinoma of the tongue in a newborn infant. The child, the son of a doctor, would not nurse and was found to have a swelling on the left side of the tongue about the size of a pea. This was thought to be a cyst, and as it seemed to enlarge a needle was inserted into it eleven days after the birth of the child. As no fluid was obtained a section was taken for microscopical investigation; the histological diagnosis was that of a papillary squamous-celled carcinoma. Three days later the growth was excised widely by an elliptical incision. The raw surface was cauterized with an electric cautery and the bleeding was controlled by suture. A further section of this specimen showed again the squamous-celled carcinoma which had been diagnosed at biopsy, with some invasion of the underlying tissue. X-ray treatment over the area of lymphatic drainage on the left side of the neck was begun twenty-two days after the birth of the child, two series of treatments being given at an interval of six weeks. There was no skin reaction at any time, and now, nearly two and a half years after the operation was performed, the skin over the treated area appears perfectly normal and there is no evidence

of recurrence. The authors describe their object in reporting this case as twofold: (1) that it is the only case of carcinoma of the tongue in the new-born that has been recorded; and (2) that the patient is probably the youngest to have received radiation therapy for malignant disease.—*B. M. J.*

"Aeroneurosis".—On examining 163 unselected aeroplane pilots Captain H. G. Armstrong found that 18 of them (11 per cent.) suffered from a nervous disorder which he calls "aeroneurosis". This is to be diagnosed by "the occurrence of a functional gastric disorder in pilots of several years' experience, combined with a general irritability and increased motor activity with subjective complaints of insomnia and mental fatigue." Prominent among the exciting causes are, first, exposure to the risk of accidents; and, secondly, what Armstrong calls, "ego deflation". In his own words, "the World War changed the status of air-plane pilots from crazy fools to national heroes..... gradually however aviation has become more commonplace..... This slow but definite change has deflated the pilot's ego and thereby created a further emotional stress. There is a constant attempt to regain face, to reclaim and hold a fading dream..... The higher the intelligence the more this holds true." He is on safer ground in arguing that prevention is more effective than any particular line of treatment. A careful examination of candidates would probably, he thinks, eliminate the condition, but would have "the distinct disadvantage of depriving aviation of those who are acknowledged to be the highest type pilots. The problem resolves itself into a question of whether it is more desirable to select the better pilots who break down after ten or fifteen years' service or poorer ones who are more durable." Armstrong does not, however, explain how the disorder could be recognised in embryo, nor why it should only be the better pilots that suffer in this way. His paper in fact does not carry full conviction. The nomenclature of psychological medicine is already blamed for being cumbersome and confusing, and a very clear case must be made out before introducing a new disease. The late Graeme Anderson used the term "aeroneurosis" in 1919 but it has never come into currency. And why should it? Flying may of course be the "trigger cause" in bringing to light conflicts of an economic, domestic, or instinctive nature. But what occupation may not have the same effect? Even if flying is regarded as an extra load upon a person this is far from proving

that the partial breakdown it helps to induce is in any way specific. To base nomenclature upon "trigger causes" is a step in the wrong direction.—*Lancet.*

Artificial Pyrexia by Short Radio Waves.—Artificial pyrexia as a method of treatment has assumed a very real importance during the last few years, so that an article on therapeutic pyrexia by means of short radio waves by Nattrass and Evans will be studied with interest, more especially as it is probably the first time short radio waves have been employed in therapeutics in this country. Since Wagner-Jauregg first treated general paralysis of the insane with malaria in 1918 the difficulties and dangers attendant on malarial inoculation have led workers to seek other means of arriving at the same end, and a variety of methods have been evolved. These fall into four classes: (1) infective organism; (2) protein shock; (3) chemical agents; (4) physical methods such as hot water, hot air, and heat generated electrically. The first three are open to various objections, such as danger to life, personal idiosyncrasies of the patient, difficulty of control, and so on. Physical methods, therefore, have in recent years attracted most attention. General diathermy has had a wide vogue and been attended by good results, more especially in America; moreover, the mortality among patients treated by this method is lower than among those treated by malaria. Various forms of electrically heated cabinets have been employed, of which the Kettering hypertherm seems to be the most successful; the electric blanket is also claimed to give good results. The idea of employing short radio waves originated with W. R. Witney, who noted that there is an elevation of the body temperature of men working in the field of a short-wave radio-transmitter. Much work has been done in this connexion by Schliephake of Jena, and Carpenter, Boak, and Page of America. The diseases which lend themselves to these forms of treatment are particularly syphilis and gonorrhoea, the causal organisms of which are peculiarly susceptible to high temperatures. G. P. I. and gonorrhoeal arthritis are the two conditions which appear to be benefited most by artificial fever therapy, but good results have been reported in tabes, syphilitic optic atrophy, cerebrospinal syphilis, disseminated sclerosis, asthma, Sydenham's chorea, and chronic arthritis. The metabolic changes associated with the treatment are interesting—accelerated pulse rate, cardiac output, and capillary circulation; fall in the blood pressure: leucocytosis; increased basal metabolic rate; and slight alkalosis; but the

most important are the fall in blood chlorides and the disappearance of free HCl from the stomach. The technique is as follows. The patient lies in a cabinet on a stretcher made of strips of rubberized canvas fixed in a wooden frame. High frequency energy at 15 megacycles per second—wave-length 20 metres—is applied by two horizontal electrodes suspended over the chest and thighs two inches away from the skin, while dry air at a temperature of 115°F. is blown into the cabinet by a fan; a rise of temperature of 8°F. per hour should be attained. When the patient's temperature has reached 104°F. he is wrapped in blankets, packed with hot-water bottles, and given copious drinks of hot saline (to replace the loss of water and chlorides). After about five to 6 hours of fever the excess blankets are removed and the temperature allowed to fall. Fifteen cases of dementia paralytica received from six to seventeen treatments, and the results compare favourably with those of malaria therapy. Three cases of tabes dorsalis were much improved, the improvement in the gait and relief of lightning pains being prominent. Of two cases of subacute combined degeneration of the spinal cord one showed great and the other slight improvement. The number of cases treated is too small for conclusions of real value to be drawn, but the method does seem to be comparatively free from danger, is fairly easy to carry out; and has the advantage of raising the patient's temperature in a relatively short time. We are not told what is the cost of the apparatus and of running it. That physical methods of inducing artificial pyrexia have come to stay and will probably replace others seems clear. Those who were fortunate enough to be present when Dr. Simpson of U.S.A. recently addressed the Medical Society for the Study of Venereal Diseases will probably put most faith in the Kettering hypertherm, the use of which was so lucidly explained. In gonorrhoea, complicated and uncomplicated, simple artificial pyrexia alone, and in G.P.I., tabes, cerebral syphilis, and even early syphilis, artificial pyrexia plus chemotherapy bid fair to revolutionise treatment.—B. M. J.

Anæsthetic Pre-Medication.—A discussion of the modern developments in anæsthesia by F. Evans (*St. Bartholomew's Hospital Journal*, March, 1936, xlviii, 106) concludes with a useful list of pre-operative sedatives suitable for adults:—

Orthopædic operations and operations upon the extremities:—

Omnopon gr. 1/3, scopolamine gr. 1/150, hypodermically and nembutal, gr. 3 orally. Avertin may be used as an alternative.

Operations about the mouth and throat:—Short (tonsil)—Omnopon gr. 1/3 and nembutal gr. 3. Evipan intravenously with or without omnopon gr. 1/3. Long (plastic)—Avertin; Evipan with hyoscine comp. A.

Block dissection of neck: As above.

Thyroidectomy:—Avertin with field block with novocaine; Omnopon gr. 2/3 and scopolamine gr. 1/150 for the bad cases combined with field block.

Thoracic:—Hyoscine com. B for men, and A for frail women

Breast:—Avertin or evipan.

Abdomen:—Appendicectomy—Avertin, evipan, or omnopon and scopolamine. Lower abdominal—Avertin, evipan, or omnopon and scopolamine. Upper abdominal—Avertin, evipan or omnopon and scopolamine.

A field block with novocaine, adequately performed, will usually obviate the need for ether.

Cæsarean section—It is wiser to avoid all pre-medication in order to ensure immediate respiration on the part of the child.

Rectal:—Piles, etc.—Hyoscine comp. B with low spinal, if desired. Perineal excision—Hyoscine comp. B with spinal gas oxygen.

Prostatectomy—Hyoscine comp. B.

Hyoscine compound A consists of morphine gr. 1/6, hyoscine gr. 1/150 and atropine gr. 1/150; and the B contains morphine gr. 1/4, hyoscine gr. 1/150 and atropine gr. 1/150.—*Practitioner*.

Obstetrics and Gynaecology

Vesico-vaginal Fistulae.—W. C. Quinby (*New England Journ. Med.*, February 27th, 1936, p. 415) records two cases of vesico-vaginal fistulae to demonstrate the urological aspects of this condition. These fistulae may be due to accidents of childbirth, but most cases follow previous operations, such as total hysterectomy; in these, since the cervix has been removed, the fistula is hard to reach for lack of tractable tissue. Other more complicated cases are those in which the opening in the bladder communicates with the cervical canal, or in which the ureter as well as the bladder has been injured with a resulting utero-vesico-vaginal

fistula. In other cases the vesical floor has sloughed to some extent following radium therapy for cervical cancer; in these the resulting scar is usually very dense, and the loss of tissue of the bladder floor and vaginal vault is extensive. Quinby points out that, since the object of operation on these fistulae is to secure a sound bladder which will hold urine, the closure of the fistula must be as perfect as possible. Closure of the vagina is of secondary importance since it cannot hold urine, and need not be perfect as it will heal by granulation. The suprapubic route affords the easiest and most complete access to the bladder, and should be employed in all but the simplest cases. Sufficient mobilization of the bladder floor from the vagina is imperative, and can be facilitated by splitting the whole detrusor portion of the bladder in a sagittal direction. Opening the peritoneal cavity is not dangerous if the subsequent repair of the bladder is perfect. After operation the bladder should be kept at rest by constant drainage until healing occurs. Serious extensive loss of bladder tissue with ureteral dislocation and much scarring is best treated by uterosigmoidostomy.—*B. M. J.*

R. C. CHAFFIN (*Amer. Journ. Surg.*, March, 1936, p. 484) describes what he claims to be a new method of post operative treatment of vesico-vaginal fistula and a simplified method of ureterocystostomy. He insists on maintenance of the prone position and the use of the Bradford frame or fenestrated mattress to ensure a constantly and completely empty bladder, which is essential to success. One case led him to believe that a large percentage of these fistulae might possibly be cured without surgery other than a transureteral (cystoscopic) fulguration to stimulate granulation and the use of the Bedford frame and retention catheter. His method of ureteral transplantation to facilitate early closing of the fistula comprises the use of a tractor linen suture in the ureteral wall, drawing of the ureter end into a stab wound of the bladder with a snug fit, and its subsequent fixation in the new position by three or four fine linen sutures.—*B. M. J.*

Clinical Differentiation of Ovarian Tumours.—E. Novak and L. A. Gray (*Amer. Journ. Obstet. and Gynecol.*, February, 1936, p. 213) discuss the clinical and pathological differentiation of certain special ovarian tumours, especially the granulosa-cell carcinoma, arrhenoblastoma, disgerminoma, and the Brenner tumour. They find from studies at the Johns Hopkins Medical

School that the first of these is relatively frequent, and they remark that, since its recognition is usually not difficult, there should be a sharper look-out kept for it in laboratories than has hitherto been the case. While precocious puberty may be due to various other endocrine lesions, the occurrence of this syndrome in association with an ovarian tumour should at once lead to the suspicion that a granulosa-cell tumour may be present. When curetting in cases of uterine bleeding in women long after the menopause reveals a typical endometrial hyperplasia, a granulosa-cell carcinoma should be suspected even if it cannot be felt, as may be the case in very stout patients. If there is a palpable tumour the suspicion becomes almost a certainty. During the reproductive period the symptoms resemble those of the more common type of excessive oestrin secretion; menstruation is usually excessive, often irregular, but sometimes normal, while long periods of amenorrhoea are not uncommon. Arrhenoblastoma should always be suspected if an ovarian tumour is demonstrated in a woman who, though previously of normal feminine type, is exhibiting symptoms of masculinization. On the other hand, disgerminoma often occurs in sexually subnormal or pseudo-hermaphrodite patients, although the tumour has nothing to do with the production of such manifestations; they do not regress with the removal of the tumour, as is the case with the arrhenoblastoma. The Brenner tumour is only demonstrable by pathological examination; it occurs chiefly in elderly women, but no such special biological effects are produced by it as are initiated by the granulosa-cell carcinoma or the arrhenoblastoma. These tumours may occur as solid growths or be associated with cysts of one kind or another.—*B. M. J.*

PROCEEDINGS OF ASSOCIATIONS, SOCIETIES, ETC.

The Malabar District Medical Association

A meeting of the District Medical Association was held in the "Hackett Wilkins Memorial Hall" Calicut on the 7th June 1936, with Major J. F. Shepherd, I.M.S., the District Medical Officer, Malabar, in the chair.

Dr. P. B. Menon, L.R.C.P. & S., L.F.P.H.S., delivered a very interesting lecture on "Making an Anatomy". The practice of Surgery in Europe and other Western countries from the very early times was traced, its development was shown and the basis

for the study of Anatomy, the basis of modern surgery was authoritatively given.

The election of office-bearers of the Association for the year 1936-37 was then proceeded with. The following office-bearers were elected.

President:—Major J. F. Shepherd, I.M.S.; *Vice President*:—Dr. N. Achuthan, M.B.B.S.; *Hon. Treasurer*:—Dr. P. Balakrishna Menon, M.B.B.S., L.O., and *other Members*:—Dr. C. K. Menon, M.B. B.S.; Dr. N. Govindan; Dr. C. M. Leelavathy; Dr. P. B. Menon, L.R.C.P. & S., L.F.P.H.S.

Dr. P. Balakrishna Menon (Eye Specialist) was "AT HOME" to the members of the Association on the occasion.

An ordinary meeting of the Malabar District Medical Association was held on Sunday the 5th July, 1936. at the Hackett Wilkins Memorial Hall, Calicut, with Major J. F. Shepherd, I.M.S., the President of the Association, in the chair. About 30 members were present.

An interesting feature of this meeting was the demonstration of a number of clinical cases, with discussions thereon. Dr. C. M. Leelavathy demonstrated a typical case of Rickets—a child of four years, with bones of legs bent, joints thickened, pigeon chest, liver enlarged, and lymphoid glands all over enlarged.

Dr. Berotta demonstrated a case of tumour in the abdomen diagnosed as Hydro-nephrosis (?). X-ray photo of the patient was also shown.

Dr. C. K. Menon showed a case in which the bile duct had been opened and gall-stones removed. Cholecystotomy was contra-indicated in the case on account of adhesions. There was a small ulcer in the first part of the duodenum. Drainage tube had been put and there was free drainage. Pus first flowed out through the tube. The patient was complaining of, before the operation, sense of weight in the epigastrium, after food, followed by severe pain. He had jaundice and vomiting. After the operation the patient had good relief and was doing well.

Dr. N. A. Abraham brought a case of a tumour on the left jaw, X-ray photo of the case also was shown. The patient was a Mahomedan boy of about 14 years. There was egg-shell crackling over the tumour: X-ray showed it as a case of Myeloma.

Dr. N. K. Koya demonstrated a case 'Osteo-genic sarcoma' with its X-ray photo. It was a case of a large tumour over the left shoulder. Its duration was only about three months. The exciting cause was said to be a fall on the left arm.

Dr. N. Achuthan demonstrated a case of Musculo-Spiral Nerve injury. The patient had a cut on the left side of the upper arm. He had a small area of anæsthesia of the size of a rupee on the dorsum of the left hand. Plaster of Paris was put on exposing the site of the injury and over the injury antiseptic dressing put on.

Another case was the application of Plaster of Paris for an injury of the knee-cap:—a good method of splinting.

Dr. P. B. Menon M.B.B.S., L.O., delivered an interesting lecture on "The treatment of common Eye complications of venereal diseases met with in General Practice". The lecture was demonstrated by a few clinical cases.

After the meeting was over Dr. P. B. Menon, L.R.C.P. & S., L.F.P.H.S., was "AT HOME" to the members of the Association. The party was a delightful one.

The Medical Practitioners Association, Nuzvid

A monthly meeting of the above Association was held at Vissannapet on 26-7-'36 at 3 P.M. with Dr. P. Bujaiiah Naidu in the chair. After prayer and reading of minutes of the previous meeting by Dr. N. Rama Rau, L.M.P., Secretary, the members passed as their foremost duty the following resolutions which were unanimously carried.

1. "This Association expresses its sense of deepest gratitude and fervent thankfulness to the Almighty for having saved the precious life of H. M. the Gracious King Edward VIII from the dastardly attempted outrage and resolves to convey to His Majesty the King Emperor its most loyal and heartfelt congratulations upon the providential escape."

2. "This Association is shocked to learn the death news of Dr. S. Rama Subbu, L.M.S., Subsidised Rural Medical Practitioner Viraganur, Salem District and the Honorary Secretary, the Provincial Rural Medical Practitioners' Association and resolves to convey its condolences to the bereaved family and members."

3. Resolved to elect Dr. D. Satyanarayana Naidu, L.M.P., Sub Assistant Surgeon, Government Hospital Nuzvid, as the President of the Association in place of Dr. D. V. Moses, transferred.

4. Resolved to celebrate the 4th Anniversary of the Association at Nuzvid in August '36 and that the Anniversary subscription be fixed at Rs. 2 per head.

Dr. P. Angaiah Naidu reported a case that was diagnosed by him as vesicular mole upon whom a laparotomy was performed

in the Nuzvid Mission Hospital taking it to be one of ovarian cyst. He then demonstrated a boy aged 8 years with persistent general anasarca and also ascites that was coming off and on for a long period resisting all treatments, two case histories of placenta previa centralis were also given by him. Dr. N. Rama Rau narrated a peculiar case of Quinine idiosyncrasy in a strong and sturdy man of 38 due to only 40 grs. of Quinine Sulph., resulting in insomnia for a long period after the subsidence of the acute dangerous symptoms under his treatment.

Another case he mentioned was one of lymph scrotum with enormously oedematous and swollen condition of the penis and scrotum and high temperature ranging between 103° and 105° for a few days and later on the swelling became marked on one side being red and congested and clear fluctuation was elicited which misled him as one developing into an abscess. This was confirmed by two other consultants also who were brought for opinion. An incision revealed no pus at all except pouring forth of lymph. Many other professional topics were discussed and after light refreshments offered by Dr. P. Angaiah, the local L. F. Medical Officer, the meeting came to a close at 6 P. M.

The Tinnevely District Medical Association, Palamcottah.

(Affiliated to the Indian Medical Association).

The Tinnevely District Medical Association held its monthly meeting in the splendid palace of Ramnad, on Saturday the 25th July 1936 at Courtallam, one of the most charming water falls of Southern India, noted for its pretty mountain sceneries. Members numbering 52 including two lady doctors, gathered from all parts of the District. All the members had an early bath in the water-falls which were in full swing. There were fine drizzlings and the members enjoyed the season well.

After light refreshments the meeting began under the Presidency of Lieut. Col., T. S. Shastri, I.M.S., at 11 A.M. The Secretary Dr. K. Rama Ayyar, M.B., B.S., read the minutes of the monthly meeting held at Papanasam on 27th June 1936, which were passed.

The following clinical cases were demonstrated :—

By whom.	Cases.
1. Dr. G. Parthasarathy, M.B. B.S., Tenkasi.	Congenital Heart Disease. (Pulmonary Stenosis).
2. Dr. A. L. Ananthanarayana Iyer, M.B., B.S., Tenkasi.	1. Mitral Stenosis. 2. Aortic regurgitation with aneurysm of the aorta. 3. Chancre lip and 4. Myxoedema.

Dr. K. Gopal Rao, L.M. & S., read interesting clinical notes of the following cases, which were operated on by Lieut. Col. T. S. Shastri, I.M.S., at the Government Head Quarters Hospital, Palamcottah :—

1. Lymphosarcoma of axilla.
2. Intussusception—Tumour of Caecum.

Dr. K. Padmanabha Ayyar, L.M.P., of Tenkasi, read an interesting paper on 'Alkalinity of blood in relation to Health and Disease'. After discussion, Lieut. Col., T. S. Shastri, I.M.S., summed up the salient and important features of all the cases, and thanked the Estate Collector of Ramnad for his readiness and kindness in placing the spacious and splendidly furnished palace of Ramnad at our disposal. Thanks were also offered to Dr. S. N. Rangachary, and his helpers for organising the most enjoyable function so well.

In the evening, a Health Exhibition was held in the town of Tenkasi.

The Ramnad District Medical Association

(Formerly Chettinad Medical Association)

The usual monthly meeting of the above Association was held at the Lady Pentland Hospital, Kanadukathan, on Sunday 19th July at 5 P.M., under the Presidency of Dr. B. V. Varadachari B.A., M.B.C.M. D.M.O., Ramnad. About 40 doctors from all over the District including four doctors from Kumbakonam were present.

After tea arranged by the host Dr. Miss Ivatts, Dr. T. S. Shetty, the Secretary, read the minutes of the previous meeting which were adopted. Then there were a few case reports—one was of a big myxomatous tumour of the hard palate in a girl of 14 years operated by Dr. T. S. Shetty in his clinic and which was discharged cured after having had severe bleeding on the 7th and 9th days of operation due to the slough opening the inferior alveolar vessel.

Another case was also from his clinic— a complicated case of subperiosteal abscess which was operated by him.

After this, Dr. M. K. Sambasivam M.B.B.S., Chairman Municipal Council, Kumbakonam, delivered a lecture on "Non-padded plaster casing in the treatment of fractures" with practical demonstrations. There were discussions and doubtful points were cleared by the lecturer. Captain G. S. K. Aiyar who came with him

gave out a few important points with regard to the subject. This over, the members witnessed a magic performance and then adjourned for dinner.

The members spent a very enjoyable evening with the excellent arrangements made by the host Dr. Miss Ivatts, the Medical Officer of the Lady Pentland Hospital.

The Medical Association, Bombay North.

The Annual General Body meeting of the above Association was held on 5th July 1936 at 3-30 P. M. at Khan Bahadur Haji Bachoo Ali Free Ophthalmic Hospital, Parel, Bombay, with Dr. S. S. Rao, M.B., B.S., the retiring President in the Chair.

The Second Annual Report was read by the Secretary and the same was passed. The statement of receipts and disbursements during the year, which was audited by Mr. D. N. Billimoria was read and approved.

Honorary auditors for the ensuing year were appointed by the General Body :—Messrs. Kalianiwala and Mistry.

The following office bearers were elected unanimously for the ensuing year.

<i>President :</i>	Dr. M. S. Batliwala, M.B., B.S.
<i>Vice Presidents :</i>	Dr. M. D. D. Gilder, M.D., (Lond) and Dr. M. C. Bilpowdiwala, M.B., B.S.
<i>Honorary Treasurer :</i>	Dr. S. V. Oak, M.B., B.S.
<i>Joint Hon. Secretaries :</i>	Dr. B. B. Vaidya, M.B., B.S., and Dr. C. S. Krishna, I.M.D.

Members :

Dr. G. M. Padke, M.B., (Lond.) F.R.C.S., (Eng.)
Dr. K. D. Manohar, M.D., (Bom).
Dr. T. G. P. Panikker, M.B., B.S., D.G.O.
Dr. G. L. Patankar, M.B., B.S.
Dr. G. V. Dravid, M.B., B.S.
Dr. D. G. Tendulkar, M.B., B.S.

In delivering the Presidential address, Dr. Rao thanked the various members of the profession who had helped to increase the membership from 36 to 108 and he hoped that the Association might flourish well and would have a premises of its own. He stressed the point of medical men taking half a day off on Sunday evenings as that would equip the members with better health. In the course of his address, Dr. S. S. Rao also suggested that the Government should pass a legislation restricting the use of the word 'Doctor' only to Registered Practitioners thus discouraging unauthorised persons in the practice of Medicine and

finally concluded by once more thanking the members for their close co-operation and asking the President-elect to take the Chair.

Dr. Batliwala, in thanking the members for having elected him as President for the ensuing year, requested the members to use their influence in increasing the membership of the Association so that it might become the pioneer Association in Bombay in course of time. He emphasised that it was mainly due to the efforts of Dr. S. S. Rao, the retiring President, the membership increased from 36 to 108 and he hoped the membership might amount to at least 150 in the ensuing year as it had already increased to 110.

With a vote of thanks to the retiring President, the Hon. Secretaries and members etc., proposed by Dr. Batliwala which was supported by one and all, the meeting terminated after light refreshments.

BOOK REVIEWS

Year Book of General Surgery 1935.—By *Evarts A. Graham*, A.B.M.D., Published by the Year Book Publishers, Chicago: Price \$3.00.

The 1935 Year Book of General Surgery edited by E. A. Graham maintains the same high standard of excellence as its predecessors. Its orderly arrangement of subjects, its numerous illustrations and the pertinent remarks of the Editor in connection with abstracts of articles wherever he thinks necessary to guard the reader from being led astray, all make the book a very readable and useful one to all classes of surgeons. For example in his remarks on an article on Trendelenburg's operation for pulmonary embolism, he writes: "In view of the difficulty in being sure that the patients will die if not operated upon and even of the difficulty in making a correct diagnosis.....the Editor is not yet convinced that more patients will be saved by this procedure than killed by it. Again, in commenting on an author of an article "Is total Thyroidectomy rational as a method of treatment" in which he condemns this procedure in heart disease, the Editor writes: "According to the A. M. A. directory, the author is an ophthalmologist.....'Shoemaker stick to your last' is obviously as apropos today as over.....2000 years ago".

Some of the interesting articles of the past year are on Evipan, being the anaesthetic of choice in Thoracic surgery, Brilliant Green being a reliable antiseptic, the fetish of catgut—the modern tendency being to use silk for all sutures, the use of

collodion in skin grafting to prevent it from slipping, the intravenous dip therapy and its indications and the maggot therapy in soft tissue infections. In the section on abdominal surgery, abstracts of articles on operative prognosis in fat and lean patients, advantages of spinal anaesthesia in upper abdominal surgery, disruption of abdominal wounds prevention and treatment, methylene blue being an aid to localisation of perforations, and the treatment of intussusception and pancreatitis, are bound to be very interesting reading.

The above are only a few of a very large number of highly useful and interesting articles on various subjects which have been abstracted in this handy volume, thus making it an indispensable addition to the library of any surgeon who wants to keep abreast of the times.—*P. G. Rau.*

Short Wave Therapy.—By *E. Schliephake*, Authorised English Translation By *R. King Brown*, B.A., M.D., D.P.H., 1935, pp. 12+238. With 94 illustrations. Price Sh. 21/net. Postage 9d. London: Actinic Press, Ltd.

This book deals with a new therapeutic measure which Dr. Schliephake has been working for the past decade. The short wave treatment has been slowly gaining some popularity among the profession. A Novel type of electrical energy is used in this treatment. The electrical field as it exists between the condenser plates of a closed oscillation circuit is utilised. The current is made to oscillate with a frequency ranging between 10 to 100 million periods per second. When a portion of the body is subjected to such a frequency there is a rise of temperature according to their specific inductive capacity. The book is divided into 7 sections and the whole field of short wave therapy has been covered up.

Doctors and Juries—The Essentials of Medical Jurisprudence.—

By *Humphreys Springstun* of the Detroit Bar. 1935 Pp. 155. Price \$ 2.00. net. Philadelphia: P. Blackiston's Son & Co. 1012 Walnut Street NC.

This book is for the benefit of the doctors engaged in medico-legal work and for the lawyers dealing with medicine in relation to law. All technical terminology therefore both on the medical and legal side has been practically reduced to a minimum for the proper understanding of the respective subjects.

The book is divided into 28 chapters dealing with the various medico-legal questions that confront the lawyer and the doctor in the execution of their profession.

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The Chemical Control of Conception.—By *John R. Baker*, M.A., D.Phil. with a chapter by *H. M. Carleton*, 1935 Pp. x + 173, London, Chapman and Hall, Ltd., 11, Henrietta Street, W. C. 2.—Price 15 Sh. net.

This book is the outcome of the author's many years of work in this speciality. In this book the author has given a descriptive account of his work and results. The book is technical, dealing with his researches in the laboratory.

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Bacterial Endo-carditis.—By *C. Bruce Perry*, M.D., (Brist), M.R.C.P., (Lond.) with an appendix on 'An experimental study of Malignant Endocarditis' by *D. M. Lloyd Jones*, M.D., M.R.C.P., 1936, pp. 137, Illustrated. [Bristol: John Wright & Sons, Ltd. Price 10 sh. 6 d.]

Issued by the trustees of the Harmsworth Memorial research Fund, this book describes Bacterial endocarditis in a very commendable manner. The subject matter has been dealt with in eleven chapters which contain all the necessary up-to-date information about the various aspects of the disease. The early chapters deal with the definition of various types, historical survey, bacteriology and morbid anatomy. The next few chapters deal with symptoms, haematology, prognosis and treatment. The chapters on bacteriology and morbid anatomy are profusely illustrated and well written. In the appendix, Dr. Lloyd Jones contributes an experimental study of bacterial endocarditis having as its object the finding of some standard method of producing the disease in animals. The subject is a difficult one but it has been dealt with in a masterly way. The book is well got up and commendable in every way and the reader, we are sure, will appreciate the promise of and eagerly look forward to the subsequent volume.

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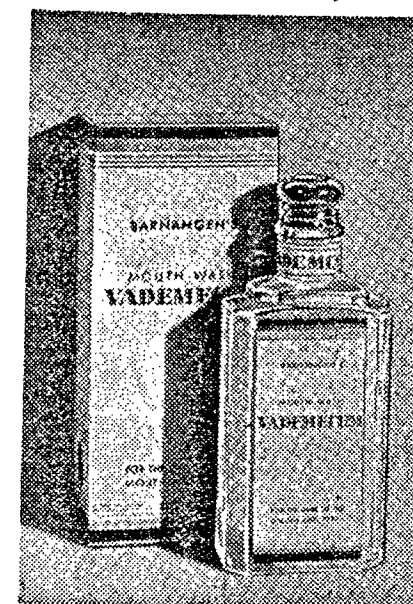
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OBITUARY

We regret to have to record the death of Dr. S. Ramasubbu, L.M.S., Rural Medical Practitioner, Viraganur, Salem District, early last month (July '36). He was one of the few medical graduates who availed themselves of the benefits of the Rural Medical Scheme inaugurated in this Presidency in 1926, and was the moving spirit of the Rural Medical Practitioners' Association organized by him in the same year. As Secretary of the Association, he put his heart and soul for the betterment of the lot of the Rural Medical Practitioners and practically wrenched concession after concession from the Government and the Local Bodies. If, to-day, the Rural Medical Practitioners' job is looked upon with pride and complacency and not with misgivings, it is in no small measure due to the untiring energy, powerful advocacy and ceaseless fight put forth by Dr. S. Rama Subbu, during the past ten years.

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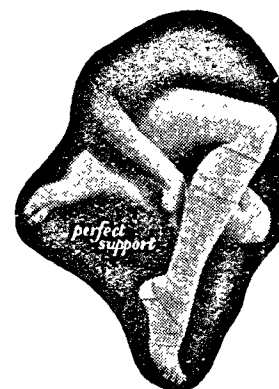
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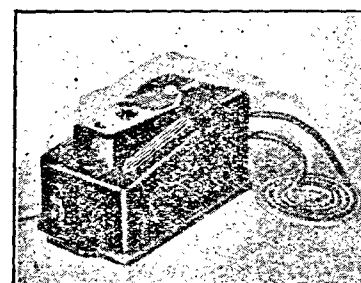
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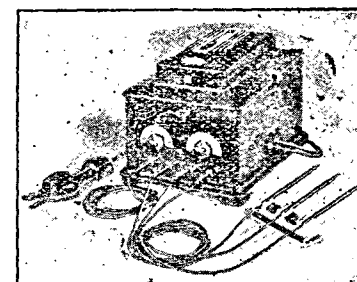


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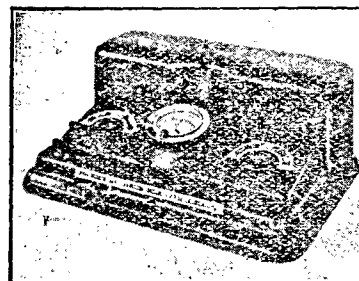
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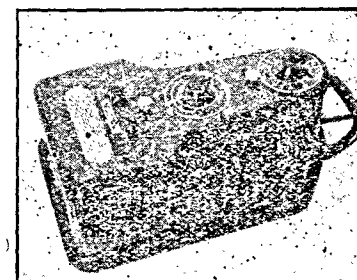
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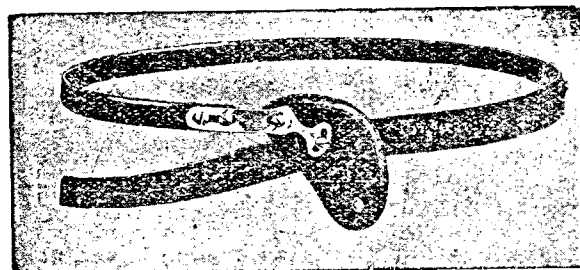
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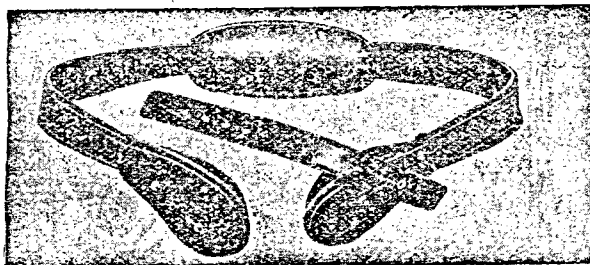
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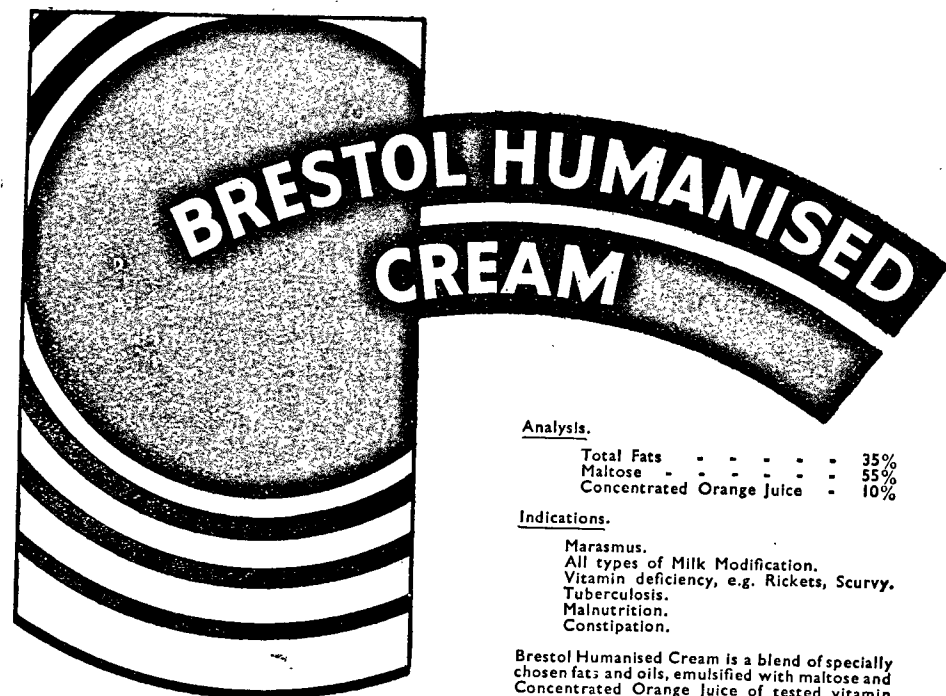
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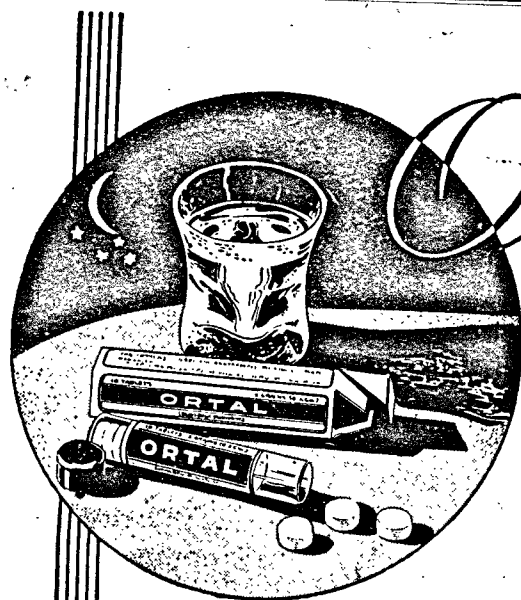
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