

# The Madras Medical Journal

The Official Journal of the Madras Medical Association.

PUBLISHED QUARTERLY.

Vol. XIV.

JULY 1932.

171

No. 3.

Editor : Dr. A. Srinivasalu Naidu, B.A., M.D., B.S.Sc.

## Editorial Board :

Mr. N. Mangesha Rao, M.B., C.M., F.R.C.S. (E.)

Dr. P. Kutumbiah, B.A., M.D., M.R.C.P. (Lond.)

Dr. P. Venkatagiri, M.D., C.M.

Mr. C. Ramamurthi, B.A., M.B., B.S., B.S.Sc.

Mr. M. Narayana Pai, M.B., B.S.



## Rates of Subscription.

For Members of the Madras Medical Association on payment of an Annual Membership fee of Rs. Five only.—Free.

Foreign 7 sh. 6d. Post Free.

For Non-Members including Medical Practitioners Rs. Three per annum post free.

For *bona-fide* Medical Students Rs. Two per annum post free.

Single Copy Twelve Annas.

# MYCOL

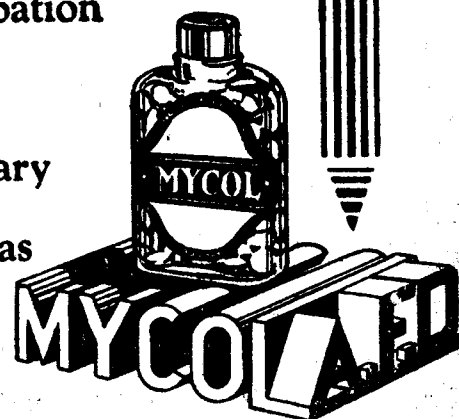


Bile Extract, Lactic Ferments & Beer Yeast.

**EFFECTIVE**

Intestinal Disinfectant  
&  
Best Bowel Educator

The  
Rational Treatment  
of  
Constipation  
and  
Alimentary  
Toxemias



The Anglo French Drug Co. (Estn.) Ltd.  
P. O. Box, 460, Bombay.

## APPAH & COMPANY,

WHOLESALE CHEMISTS AND DRUGGISTS.

WAREHOUSE AND RETAIL STORES

APPAH BUILDINGS,

286, CHINA BAZAAR ROAD, MADRAS.

Wholesale importers of Chemicals,  
Drugs, Pharmaceutical Products, Pro-  
prietary Specialities, Surgical Instru-  
ments and Accessories.

Stockists of Products of the principal  
manufacturers of Medicines and  
Surgical Goods.

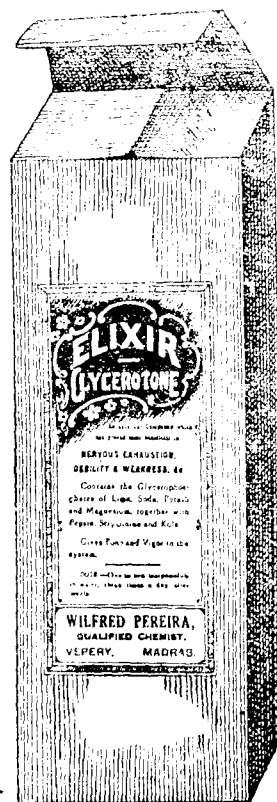
*Orders and Inquiries promptly attended to.*

**PRESCRIPTIONS**

**ACCURATELY AND RELIABLY DISPENSED**

**DISPENSARY 8 a.m. to 8 p.m.**

When writing to advertisers, please mention The Madras Medical Journal.



FOR PURER BLOOD

FOR STRONGER NERVES

## "ELIXIR GLYCEROTONE"

A UNIQUE PREPARATION OF THE  
GLYCEROPHOSPHATES.

A Food-like form of phosphorus, for defective nerve-cell nutrition, with excessive phosphatic waste, restoring nervous energy in many chronic conditions, in nerve strain from prolonged use of mind or body, nerve weakness in the aged, neurasthenia, and nervous debility.

*A powerful restorative during convalescence.*

**Rs. 2-8 PER BOTTLE.**

## HEMO-HEPALIX.

A PALATABLE ELIXIR OF THE EXTRACT  
OF LIVER COMBINED WITH HÆMOGLOBIN.

*A powerful restorative preparation in*

ANÆMIA, GENERAL DEBILITY,  
WEAKNESS, KALA-AZAR,

specially indicated in Pernicious Anæmia and  
takes the place of Raw meat and Raw Liver.

One of the earliest effects to follow the administration of HEMO-HEPALIX is a rapid increase in the number of red corpuscles, manifested by return of appetite; then, in the course of a few weeks by restoration of strength and the return of colour to the cheeks and mucous membranes, disappearance of the Anæmia and a return to normal conditions.

### DIRECTIONS FOR USE.

ADULTS: A tablespoonful just before, or immediately after,  
the two principal meals.

CHILDREN: One or two teaspoonfuls, according to age, twice  
a day immediately after the two principal meals.

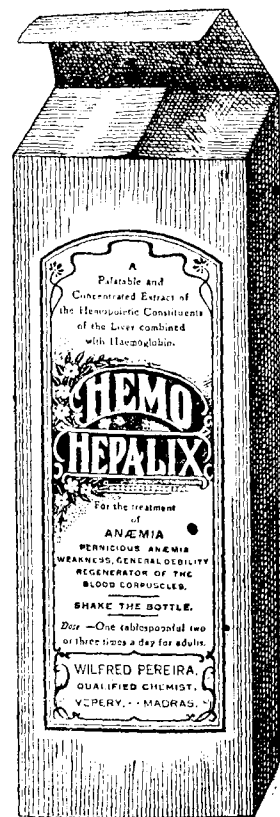
**Rs. 3-8 PER BOTTLE.**

**WILFRED PEREIRA,**

QUALIFIED CHEMIST,

VEPERY.

MADRAS.



## Injuries of MUSCLES, JOINTS and TENDONS

When treating injuries of the muscles, joints, and tendons, it is now generally agreed that the effort should be towards certain definite directions with certain objects in view. These are:

1. The alleviation of pain
2. The promotion of repair
3. The restoration of function



## ANTIPHLOGISTINE

by supplying continuous moist heat, produces analgesia; by its plasticity it induces rest; by its osmotic action it reduces the effusion and absorbs the exudates. These, coupled with graduated exercises to restore function, constitute the rational circle upon which is based the therapy for the modern treatment of injuries of muscles, joints and tendons.

*Sample and literature will be sent upon request to*

THE DENVER CHEMICAL MFG. CO.

163 Varick Street, New York, N. Y.

MULLER & PHIPPS (INDIA) LTD., Box 773, BOMBAY.

*When writing to advertisers, please mention The Madras Medical Journal.*

When writing to advertisers, please mention The Madras Medical Journal.

# KAL-DERMIC

"IDEAL FOR DERMA-CLOSURE"

Messrs. Davis & Geck, of New York, the makers of the well-known "D. & G. Surgical Suture" have just offered to the profession a new ideal suture for skin and tension work. The need for such a product has long been recognized and KAL-DERMIC (which is the brand name) is offered as a result of exhaustive experimental work by the Davis & Geck organization.

Famous Hospitals throughout the world use D. & G. Sterile Sutures. The Davis & Geck organization specializes exclusively in Surgical Sutures. It is an organization of men inspired by high aims; men fitted by training, modern knowledge and practical experience, to make sutures worthy of the noted Surgeons who use them. The D. & G. output exceeds several lakhs tubes daily.

KAL-DERMIC skin sutures are non-capillary and are unusually flexible. They are strong, resistant to tissue fluids, non-irritating and uniform in size. Their distinctive blue colour is stable, making the sutures readily discernable in the tissues.

They are sterilized by heat and are unaffected by age, climate or light. The exteriors of the tubes may be sterilized either by boiling or by the use of any active germicidal solution.

It may be said that the "D. & G." Catgut best meets the requirements of modern surgery, and its distributors are The Bombay Surgical Company, New Charni Road, Bombay.

When writing to advertisers, please mention The Madras Medical Journal.

## THE MADRAS MEDICAL JOURNAL.

Vol. XIV

JULY 1932.

No. 3

### CONTENTS.

|                                                                                                             | PAGE.  |
|-------------------------------------------------------------------------------------------------------------|--------|
| 1. SOME OBSERVATIONS ON MALIGNANT DISEASE AND ITS TREATMENT IN SOUTH INDIA<br>By N. S. Narasimham, F.R.C.S. | ... 37 |
| 2. EXCESSIVE LEANNESS<br>By Dr. A. Srinivasulu Naidu, B.A., M.D.                                            | ... 56 |
| 3. CASE REPORTS                                                                                             | ... 62 |
| 4. EXTRACTS                                                                                                 | ... 64 |
| 5. OFFICIAL ITEMS                                                                                           | ... 67 |
| 6. EDITORIAL                                                                                                | ... 68 |
| 7. ASSOCIATION NOTES                                                                                        | ... 76 |



JL

Lm211-N21MM

N32.14.3

## EDITORIAL NOTICE.

The Madras Medical Journal is issued quarterly, in January, April, July and October about the 20th of the month. All Editorial communications, reports, books for review and exchange should ordinarily reach the Editor, The Madras Medical Journal, 3, Gengu Reddy Road, Egmore, Madras, one month prior to the date of issue of the Journal, preferably earlier. Original articles, clinical lectures, case reports, abstracts, Medical Society addresses are invited. Contributors of original articles will be supplied gratis with twenty reprints of their papers, if applications for the same are received by the Editor along with the contributions.

## BUSINESS NOTICE.

### Subscription Rates.

To members of the Madras Medical Service on payment of an Annual membership fee of Rs. Five only.—Free.

To Non-members including Medical practitioners and others Rupees Three per annum post free.

To *Bona-fide* Medical Students. Rs. Two per annum post free.

Foreign 7 sh. 6d. post free.

### Rates of Advertisement.

|                               | One Page. | Half Page. | Quarter page. |
|-------------------------------|-----------|------------|---------------|
|                               | Rs.       | Rs.        | Rs.           |
| Single insertion              | ... 20    | 12         | 7             |
| Three insertions              | ... 40    | 24         | 14            |
| 4 insertions                  | ... 50    | 30         | 20            |
| 4 insertions (inside reading) | ... 60    | ...        | ...           |

All advertisement charges are payable strictly in advance.

All advertisement charges and subscriptions are payable in advance. Letters relating to the publication, sale, and advertisement department should be addressed to the Business Editor, The Madras Medical Journal, 9-A, Luz Church Road, Mylapore, Madras.

Copies of the Journal can be obtained at twelve annas each from Messrs. Solden & Co., Printers, Triplicane, Madras, or the Secretary, 9-A, Luz Church Road, Mylapore, Madras. Changes of address and complaints of non-receipt of Journals should be immediately communicated to the Secretary, to the above address. Matter for advertisement should reach the business Editor at least ten days before the date of issue of the Journal.

# The Madras Medical Journal

The Journal of the Madras Medical Association.

PUBLISHED QUARTERLY.

Vol. XIV.

July 1932.

No. 3.

## Some Observations on Malignant Disease and its Treatment in South India.

(Continued.)

BY N. S. NARASIMHAM, F.R.C.S.,  
General Hospital, Madras.

*Abdominal tumours.*—A case of recto-peritoneal growth after explanatory laparotomy, was treated by surface application of 75 mg. for 10 days. The growth had disappeared when the patient came to present himself after six weeks. He was readmitted in two months with secondary growths in the lungs but there was no palpable tumour in the abdomen.

*Laryngeal cancer.*—All the laryngeal cases died, in one of them radium was implanted after supra-hyoid pharyngotomy. Surface application was tried in one patient on four occasions, the patient who was apparently getting on well, died suddenly after two months. Growths in the pyriform fossa were treated by implantation of radium from outside, combined with removal of glands. There was one patient where the primary focus and the glands had subsided but there was a secondary deposit in the spine.

*Cancer of rectum.*—It is interesting to note the duration of symptoms prior to coming to hospital are as follows, six months in one case, 1½ years in 3 cases, 1 year in 1 case, 2 years in 3 cases, 4 years in 2 cases, 6 years in 1 case, 8 years in 1 case. It is our routine to do a colostomy wherever possible if the patient is willing.

It commonly said by many doctors that life is not worth living after colostomy. I have known a patient a poor man who has done well for 17 years with a colostomy. I would draw your attention to a paper on the management of colostomy cases by Lokart mummery. No cup is required. An incision through the sheath of the rectus is better as the patient develops a better control rapidly in a fortnight. Technique of colostomy requires care. Monynihan's method is preferable to avoid a prolapse; I have seen two cases of prolapse; they are reported in the Annual Report of the General Hospital for 1930. After a colostomy radium is implanted around the anus by removing the coccyx in the anal growths; in two cases perineal excision was done without radium both of whom did well.

One of 1928 cases was given radium by cavitary method five times. Finally laparotomy was done and radium was implanted into the growth by the abdominal route. The patient died. In all rectal cases vomiting and abdominal distension were frequently noticed after radium application.

One case when colostomy was done in 1928 and radium given by cavitary method died in December 1929. This was again an obese patient.

I was able to watch a case of colostomy done for a case of cancer of rectum before the days of radium and he lived nearly four years.

Three cases were transferred from the Medical Wards. Prophylaxis of this group is routine rectal and sigmoidoscopic examination in all cases of rectal complaints, and careful watch of papilloma, polypus and adenoma cases. There was one case supervening on multiple adenoma of rectum.

From a study of 303 cases by Hayden & Shedder<sup>46</sup> in 16 years, adenomatous polypus constitute the most dangerous pre-cancerous lesion.

Colostomy as an adjunct to radical operation is always necessary. In the above series only 21 cases who had positive pathological reports of cancer and alive without symptoms and all have had complete operations.

A radical operation, by one of the several methods, along with colostomy offers the patient his best and we believe practically his only

chance of cure. Radical operation definitely prolonged the life of 42, who subsequently died of recurrence. Radium and X-Ray as at present used, must be considered purely as palliative agents in the treatment of cancer of the rectum. Patients receiving no treatment lived about the same length of time, on the average, as did those cases radiated; surgical diathermy is of use in reducing the bulk of inoperable growth.

The following information gathered from Gordon Watson<sup>47</sup> has been the guiding line in the treatment of rectal cases.

Squamous celled carcinoma involving the anal canal and perineal skin can be relied on to respond to radium with far-more certainty than columnar celled carcinoma, and if seen in the early stages can be cured without resort to colostomy.

Radium should be employed for *fixed inoperable growths* if reasonably accessible to radiation and if no visceral metastasis is discovered.

Local conditions which favour excision are :—(1) a growth which involves the anterior wall of the perineal portion of the rectum in the male with some fixation is not very accessible to uniform radium implantation.

*Contra-indications.*—Perforation into the ischio-rectal fossa, with secondary suppuration, is a definite contra-indication to radium. In cases of perforation into bladder, radiation should be employed when pains, tenesmus or haemorrhage makes the patient miserable.

(2) A growth which involves the pelvic portion of the rectum is accessible to abdominal radiation and excision may only be possible by the abdomino-perineal route.

*Effect of radium therapy of 50 mgs.*—Cavitary method :— and repeated for short periods of 24 hours :—

In the majority of cases only the surface area of growth was destroyed by radio-necrosis and little permanent benefit resulted.

Frequently severe radium burns followed this method, resulting in great pain and distress to this patient.

In 1924 Neumann and Caryle of Brussels introduced the interstitial radiation with needles after surgical exposure of the growth from the perineum.

Experimental work shows that tissues which are most active in mitosis are most susceptible to radium and further that mitosis is inhibited soon after the application of radium, though it returns about four days later in disordered fashion and is soon followed by cell disintegration. Experimental work seems to indicate that the period of time required to inhibit and disintegrate a number of cells in different stages of activity (given an adequate dose) is not less than about 7 days. Ten days have been adopted by Sir G. Watson for rectal radiation though shorter periods are adopted within the abdomen (5 to 8 days) owing to the great susceptibility of the peritoneum to irritation.

*Indications for radium.*—(1) In cases too advanced for radical surgery (a) a few cases will respond so that the growth can be destroyed and a cure result, (b) growth in some instances can be reduced in size and rendered sufficiently mobile to permit of excision, (c) in the most advanced cases pain can be relieved, haemorrhage checked and excessive secretion reduced, (d) local recurrences following excision, and secondary glands in the groin, can be completely destroyed, (e) radium may be employed as a secondary measure to deep X-Ray therapy in cases too advanced to attempt radical treatment with radium by open operation. (2) In cases considered suitable for radical operation but in which a radical operation is contra-indicated on other grounds or is refused by the patient.

*Methods.*—(1) Barrage by open operation from the perineum with needles after preliminary colostomy, (2) intra-abdominal operation with insertion of needles, or seeds, (3) radiation through the vagina, (4) intra-rectal radiation with needles. (5) radiation through perineal skin, (6) surface radiation (Columbia paste), (7) distant Bomb therapy (D. Quicke does this a preliminary to interstitial radiation).

*Open operation posterior barrage.*—The lines of lymphatic spread along the superior middle and inferior haemorrhoidal arteries are barraged and subsequently the growth is uniformly "needled" so that all parts of the growth especially the periphery receive as far as possible uniform radiation of not less than 1 mg. per c.c., time 10 days dose 30 to 60 mgs. of radium. The wound takes six weeks to close. The primary reaction is usually slight but sometime is followed by extreme weakness, loss of appetite and occasional vomiting—a group of symptoms which has never proved fatal.

Most marked change occurs in the third month.

When deep ulceration is present needles should be confined to the periphery of the growth and the non-ulcerated areas of the growth; dose should be lighter.

An excessive dose results in a stricture; an inadequate dose will retrogress the growth almost entirely but not completely and subsequently show increased activity or there may be practically no response (a radio-resistant tumour). In cases of large growths it is better to risk a full dose.

Repetition of radiation is not wise as primary radiation tends to produce an increased degree of radio-resistance. Rectal radiation is followed by a considerable degree of peri-rectal fibrosis, which diminishes the blood supply to the part and tends to render subsequent irradiation ineffective, apart from any immunity (if such occurs) which the cancer cells may have acquired.

This peri-rectal fibrosis must be distinguished from extension of growth.

*Abdominal Radiation.*—If the growth is partly or entirely above the peritoneal reflection, effective radiation from below is either impossible or both difficult and dangerous. Needles are left in from 5 to 8 days in the substance of the growth in a uniform manner with less risk of intestinal leakage and into the mesentery behind and above the growth. The first stage of colostomy is carried out at the conclusion of the radiation.

If needles are employed drainage is essential and packing-off of the irradiated area is advisable. The strings attached to the needles are brought up to the abdominal wall but buried beneath the skin. When needles are employed it is advisable if possible to delay opening the colostomy until after removal from 5 to 8 days later.

It is desirable to insert the needles in the long axis of the bowels, and not at right angles to it.

The great disadvantage of the use of needles is the fact that they require to be removed and they entail a risk of peritonitis. The needles are inserted with the patient in the Trendelenburg position, the same position should also be adopted when they are pulled out.

*Vaginal radiation* is useful for growths which involve the anterior wall of the perineal portion of the rectum in combination with exposure from behind and a posterior barrage or with abdominal radiation.

*Intra-rectal and peri-rectal radiation.*—Useful in early cases where operation is refused or contra-indicated.

*Radiation prior to excision*; in some instances an inoperable case can be rendered operable by the preliminary use of radium; excision should not be delayed too long after radiation so as to avoid the difficulties which may result from cicatricial contraction and adhesions.

If radium is employed within the abdomen, it is unlikely that any abdominal excision will be possible at a later date owing to the plastic inflammation which usually follows.

Proliferative endarteritis of the arterics was seen in a case which was excised 33 days after radiation.

An over dose produces a severe peripheral neuritis.

Excision when possible must be recommended when radium fails at the first count.

#### Breast (28).

The following cases were seen :—

- 4 Europeans ages 26, 53, 70, 64 (3 left side and one right side).
- 3 Muhamadans ages 30, 40, 40 (all 3 right).
- 3 Anglo-Indians ages 60, 71, 70 (all left).
- 6 Brahmins ages 33, 45, 30, 45, 45, 54 (5 left and one right).
- 12 non Brahmins ages 52, 50, 50, 42, 34, 35, 40, 40, 25, 35, 30, 46 (5 right, 5 left, 2 both sides).
- 1 Parsi age 60 (left).

There were two cases of sarcoma of the breast.

There were three cases in males not included in the above; Of the 29 cases,

One died of pneumonia three days after admission (the case was operable).

One died of secondaries in the brain on the same day of admission.

One was unfit for radium treatment.

Two refused treatment one of which a recurrent cancer (six months after operation elsewhere).

Ten of the cases had undergone some operation, the details of which are as follows :—

Four cases were operated here, (a) Spheroidal carcinoma of breast—complete operation with radium implantation 15 needles 54 mgs. for 8 days, the wound healed by first intention and is doing quite well, (b) an encapsuled tumour was removed in a six months pregnant woman aged 25 from the left breast upper and outer quadrant. Section showed it to be carcinoma. Radium implantation was done on the 8th day after the initial operation 32 needles 52 mgs. for 9 days. This patient on arrival in London underwent a complete operation. Col. R. G. G. Croly was kind enough to obtain a copy of the Pathological report.

*Specimen*:—L. breast with pectoral muscles and axillary glands received 27-2-31.

There is a short linear operation scar in the upper inner quadrant, and several punctate, adherent scars are present in the skin over the central part of the breast. The gland is of firm and fairly regular consistence, and no localized tumour is palpable. On incision, the greater part of the breast tissue is uniformly smooth, and slightly fibrotic with a few thickened strands corresponding to the lines of the cutaneous scars; the lower part presents a distinctly glandular appearance.

Microscopically sections of two of the upper scarred area show dense fibrous tissues with a few compressed and atrophic glandular acini.

In sections from the lower part there is extensive alveolar proliferation; the individual lobules, though hyperplastic, are circumscribed by fibrous and areolar tissue; a few small areas of pericanalicular fibroadenomatous formation are also seen. The scar tissue in this part passes through the masses of the glandular acini.

No hyperplasia of the lining epithelium of the alveoli is evident in any of the six pieces of tissues examined, but the majority of the epithelial cells show fairly advanced hydropic degeneration.

In the three lymphatic glands taken for section inflammatory changes of moderate degree alone are seen.

In none of the sections examined is there evidence of carcinomatous change; the histological appearances are those of fibrosis and atrophy in the upper part of the breast, and of chronic glandular mastitis in the lower.

That is a very good evidence in favour of radium. The patient is doing well now.

(c) The third case is one aged 50 years, she underwent a radical operation on 11th April 1930; with involvement of supraclavicular glands also on 25th April, radium application externally was given a pad of 30 mgs. over left breast, 25 mgs. over supraclavicular region and one pad of 25 mgs. axilla. The patient was seen on 20th June 1930 and a radium implantation was done—12 needles, 30 mgs. for 5 days. The patient died in her home in December 1930.

(d) The fourth case was operated on for chronic interstitial mastitis—radical operation combined with radium. The histological report was “excessive proliferation of the acini.”

The six following cases were operated elsewhere:—

1. A case of duct papilloma and paget disease.

She was a relative of a doctor and had been under constant medical supervision. She developed three years ago what may be clinically termed Paget disease of nipple; it was sectioned and reported on by a pathologist as chronic inflammatory tissue; she came into the ward for a blood stained discharge six months after this, the eczematous condition obviously never cleared up. A duct papilloma was diagnosed and a complete removal was suggested even though no palpable tumour could be made out. She refused the operation and six months after a radical operation was done by the surgeon who first excised the bit for section. A few months later she came here for a lump below the scar which proved to be only “chronic inflammatory.” Nine months after she died with secondary deposits in the spine and pelvis. She had radium treatment twice.

2. Complete operation in September 1926, recurrence now treated with radium—a radium burn was left which took a long time to heal, died in her home in February 1930.

3. A partial amputation of breast for a growth was done in a woman aged 30 years three months before admission here—recurrence at the upper end of the scar excised and treated with radium implantation and teletherapy. She died in two months in her home. She is said to have developed a growth in her forearm.

4. A fat tall woman aged 34 was admitted with a lump along the scar—operation done 8 months ago. Radium implantation was done; 20 needles 48 mgs. for 8 days.

The patient was lost sight of. She was treated in a second hospital with radium.

5. Female aged 25 operated in 1928 in other hospital for a lump in her breast; lump has again appeared. Details of the first operation could not be obtained probably the growth was not sectioned and so no advice was given. The areola and nipple was intact she was treated with radium. She considerably improved: She died in June 1932 of secondaries in spine.

6. Operation in 1927 August—complete operation was done she came with a lump in her axilla in June 1930. She was treated with radium. She is doing well at present.

Of the other 14 cases 10 were not fit for operation and were treated only with radium, four of them were early cases and were treated with radium only, of these two were Europeans and two Anglo-Indians. It is obvious that the more educated patients seek relief early.

Of these four, one aged 70 years died of secondary deposits in spine a year after treatment. There was no growth or any signs of disease in her breast. The second aged 71 years came back 1½ years later with secondary deposits in her lungs. There were no signs of growth in her breast. The other two cases are alive and well (two years after treatment). Of the 10 cases, three are recent (six months). The rest of the seven are dead.

There is always improvement in the growth which melts away easily. In one case of “cancer on currasse” in the two months she was

under observation with radium implantation and subsequent teletherapy, one could see the opposite breast and axillary glands getting invaded by permeation.

Of the three cases of male breast two were treated with radium and one was unfit for treatment.

The expectation of life of a woman with untreated cancer of breast is 3 to 5 years, that of a woman operated on under average conditions 5-7 years and that of a woman operated on under the best condition 12-9 years.

Carcinoma of the breast belongs as a rule to the Radio-resistant type of tumour *i.e.*, it exhibits little or no signs of regression after it has been subjected to a given dose of external radiation.

It is important to expose the whole breast to radiation and not only that part containing the palpable lump. It is illogical to irradiate the axilla, subclavicular and supraclavicular regions and intercostal spaces without radiating the whole breast itself. It is true that carcinoma appears as a rule in only one part of a breast, although epithelial cells may escape from the primary epithelial neoplasia in ducts and acini from many foci in that part. Dr. W. Cramer was the first to show that when a tar carcinoma has been removed from one part of a tarred cutaneous surface, a fresh focus of carcinoma may rapidly appear in another part that was previously not carcinomatous.

A complete radiation of all cystic breasts would be a wise precaution.

There are no clinical signs by which a localized carcinoma can be distinguished from one that is diffuse; the extent of the disease may have been widespread and the lump may be a late manifestation; evidence of wide extension is detectable only by microscopic examination. There is no general correlation between the extent of the area occupied by the disease and the size of the lump or length of time it has been noticed. It is important to subject the whole of the breast suffering from Paget's disease of the nipple to interstitial radiation if they are to be radiated at all.

Interstitial radiation is the operation of choice in all cases of early carcinoma of the breast.

There should be a uniform distribution of the dosage. The breast being often mobile it should be fixed in the position in which needles are put in by strapping. If the size of the breast is big as 2 to 3 lbs. in weight, the breast consists chiefly of fat, and the glandular elements may be scattered in branches of connective tissue, that are widely separated from each other by adipose tissue, or the gland may be more compact and an enormous collection of fat may surround it. The dosage of radium to so large an area might be more than the blood could tolerate with safety unless it were administered piecemeal.

In the cases in which the history is a fairly long one, the result has often been satisfactory. The same can be said with regard to the size of the growth and its local extension and I have assumed rightly or wrongly, that this probably points to a very good resistance on the part of the patient to the invasion of the growth, recurrence is apt to declare itself within the course of the first year or two after any operation for malignant disease. It is often impossible to say before the operation just how much advanced they may be; otherwise I am quite sure that it would often be better to desist from interference, for the operation in some cases appears to disseminate the disease.

The radium treatment of carcinoma of the breast has been used for recurrent nodules since 1921 and for primary growths since 1924 at St. Barts, London, by Mr. G. Keynes. His technique has been followed as far as possible. There is an obvious change in the tumour within one or two weeks. After two to three months the small tumour completely disappears. If the tumour is large it may take six to nine months. It will be wiser to give a second treatment if it contains any residual tumour which may result in further shrinkage or even disappearance of the tumour. If little change occurs it is probable that the tumour consists only of fibrous tissue. In spite of this, excision of a residual tumour should be done. If an ulcer is left behind with or without nodules around it, local removal can then eradicate the disease. As pointed out above it is desirable to irradiate the entire mammary area and the lymphatic area between the mammary gland and the axillary glands, *i.e.*, the subpectoral region.

Most of the patients died of secondaries in spine. One patient aged 70 was frequently complaining of pain in the various joints and back. She was several times X-Rayed but no secondary deposits were seen. Finally she developed secondaries in spine.

Another patient has similar complaints and it is not possible to say how she will terminate. This patient had a course of ultra-violet light treatment. Patient who develop secondaries often complain of such pain. Can anything be done at this stage?

#### Penis.

|                                           |                                                                                                     |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Partial amputation elsewhere ra insertion | 2 cases.                                                                                            |
| Partial amputation here plus do.          | 2 cases.                                                                                            |
| Complete amputation here plus do.         | 2 cases.                                                                                            |
| Complete amputation only                  | 1 case.                                                                                             |
| Radium only                               | 7—4 died of disease and<br>2 of uraemia during<br>treatment.                                        |
| Suprapubic drainage with Radium—          | 1 can (Had a urinary<br>fistula) underwent<br>a partial amputa-<br>tion elsewhere. Do-<br>ing well. |
| Unfit for any treatment                   | 4                                                                                                   |
| Refused treatment                         | 1                                                                                                   |
|                                           | —                                                                                                   |
|                                           | 24                                                                                                  |
|                                           | —                                                                                                   |

The technique is to irradiate the growth and the groins and pubic region and the paths to both the groins. In a recent case done elsewhere I observed a number of nodules to the groins although the groin glands have been excised.

A routine blood urea examination is done after the first two ureamia cases.

One young man refused an amputation and wanted radium treatment, but the disease was not checked.

One of the cases had a cancer of the cheek also. Two cases gave history of congenital Phimosis. There was a case of benign polypus of the urethra near the meatus which was excised. One patient who had stricture of urethra for several years developed epithelioma at the floor of the urethra in the penile portion.

One had association of elephantoid leg and another diabetes.

Judging from our results complete or partial amputation of the penis with removal of glands (7 to 5 years had given complete freedom for several years and it is better to do the operation in these cases radium being resorted to in frankly inoperable cases which may render the case operable.

Some of the worst cases improve and for this reason growths with the greatest amount of exuberance and external ugliness are not always the worst so far as prognosis is concerned.

Every case which does not show unequivocal evidence of dissemination should have the chance which only an operation offers. Experience up to the present time justifies the belief that the best chance for the victim of malignant disease lies in a well executed excision of the growth together with the path of probable cancer invasion while the disease is still local.

*Testis.*—There were two cases of Teratoma of testis with abdominal glands. As the growth of the testis was enormous it was excised first to make like bearable. Another case which was operated elsewhere was admitted with enlarged glands abdomen and paraplegia. Excision of testis as high as possible is essential; abdomen can be irradiated by external irradiation or bomb.

*Bladder.*—There was only one case of villous papilloma of the bladder in 2½ years, although cystoscopic examination is the rule in all cases of haematuria.

There was one case of myosarcoma bladder which was treated with suprapubic cystotomy and radium insertion through the suprapubic opening. One big tumour which could be felt per rectum and suprapubically has resolved. He is having a permanent suprapubic fistula with a Pezzer catheter. He comes for periodical cleansing.

*Prostate.*—No case of malignant disease of prostate was treated with radium in this series.

*Hypernephroma Kidney.*—Two cases were treated by nephrectomy.

*Vagina.*—One case of lower half of the posterior vaginal wall was treated with radium implantation with an interval of three months. She did well. She died in June 1932 a year after treatment.

*Cervix.*—The cases treated are few. One case was treated by bomb, one by 50 mg. in a container for 48 hours and three by interstitial implantation kept in for seven days.

The average period of life was one year in three cases. They were all inoperable cases. One is a recent case.

*Labia.*—There was one case and she was transferred to Government Hospital for women.

*Sarcomata.*—

(1) a case of sarcoma in axilla in man with multiple neurofibromata excision of tumours and radium implantation. Patient is doing well.

(2) operable tumours are operated and radium is implanted as a prophylactic measure to prevent recurrence.

Operation only 3 (2 died)—amputations.

Radium only 8. One has developed paraplegia; there was one case of sarcoma of nose.

Operation and Radium 8—1 dead.

Sarcoma Maxilla operation + Radium 2 } 1 died.  
operation only 1 } 1 „  
not fit 2 }

Radium for sarcoma thigh and subsequently amputation one. Three cases of bone sarcoma (two endosteal) and one periosteal has been treated with radium. I cannot judge the results at present.

One myeloma has been treated with radium. He has had a fracture one year ago. It is difficult to judge the effect of radium in this case.

*Cutaneous Epitheliomata.*

Operation + Radium—4 cases.

Radium only—12 cases (1 died.)

Of these 4 were in the scalp.

There were two cases of epithelioma of pinna of ear one an Anglo-Indian the other an Indian. The Anglo-Indian patient improved a good deal but died suddenly. In the other case the pinna has been completely removed and radium implantation has been done.

There were two cases in face, one melanoma of nose, one of foot tissues, all of them did well.

Wherever possible it is better to excise and skin graft. There was one case of epidermoid carcinoma of finger the growth was excised and treated with radium.

There were three cases of adenocarcinoma of groin two on the right side and one on the left side. No primary growth could be seen or felt. One was a male and two females. They were treated with radium and all of them have markedly improved.

Occurrence of metastasis without primary disease is best seen in the squamous carcinoma of the groin glands in chimney sweeps in whom no primary growth or sore has been observed by competent observers. The primary disease got well but not some of the cells containing the material of cancer had been conveyed to the lymphatic glands. Cancer gets well spontaneously both in animals and human beings much more commonly than we know of at present.

*Rodent ulcer.*—There were seven patients: two Anglo-Indians, two Europeans and two Indians. They were treated with radium external application in two cases and others by implantation all of them did well except one Indian patient who is suffering from a tuberculous elbow joint. He is rapidly going down hill. I cannot compare with a series treated with excision and skin grafting. From my experience of excision cases done by others they seem to do equally well. But it was in rodent ulcer that the beneficial effect of radium was first noticed and hence the radium treatment is followed.

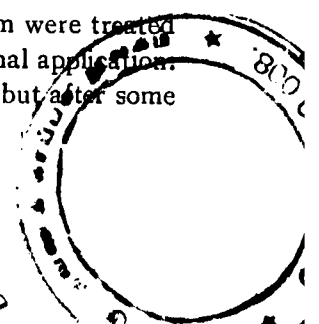
I must warn that the two cases had X-Ray exposures and there was no improvement in them. X-Ray exposures for a long time do harm by inducing epitheliomatous change.

*Malignant thyroid.*—One case was treated with radium. There was no effect on the size of the tumour.

*Malignant disease of vertebrae.*—Round celled sarcoma—Patient refused treatment.

*Brain tumours.*—There were three cases all of them were treated with radium two by insertion of needles and one by external application. All of them died; one showed a remarkable improvement but after some time developed hemiplegia.

52  
Lm 24, N21 M21  
N22. 14.3



*Prophylactic measures.*—I think the patients with discharges ought to be kept separate and a fair degree of precaution taken. It is right to note that the Annual Report of the Surgeon-General for 1928 had included this disease under infectious diseases.

Physical exercise in all ages would be a very valuable prophylactic measure.

There is no proof for any definite indication of implication of occupation as a factor in the causation of disease in this province, but I must say I have not met with a Rickshaw man suffering from cancer.

Circumcision in adherent prepuces, cleaning of the prepuce, removal of non-malignant growths and subjecting them to microscopic examination, refusing to treat breast and uterine complaints without a proper examination would form valuable prophylactic measures. Rectal and sigmoidoscopic examinations in rectal complaints are recognised as valuable aids. A good deal of work is done in the detection of carcinogenic mineral oils in connection with Mulespinner's cancer and will prove to be valuable in future.

Prophylaxis of burn scars by skin grafting preferably whole skin grafting is also valuable.

*The duty of local authorities and the medical profession and public press.*—Almost all countries except the Asiatic countries excluding Japan and Ceylon have varieties of organisations which in varying measure have organised to educate the public in the prevention, early diagnosis, early treatment and concert registration of deaths from malignant disease.

The lines of action that would be most suitable at present for this province would be to educate ourselves and the future generation or students that the disease when the patient consults us is really one of two years old, to enlist the co-operation of all local bodies and the health staff, to educate the public, to offer increased facilities for diagnosis especially microscopic examination of all growths removed, and facilities for transport, following up and recording of cases.

Our own experience with the follow up system has been very satisfactory. The Indian patient certainly realises what is good for him,

There is an organisation of service for diagnosis and treatment of cancer in America and the American College of Surgeons has specially opened a bureau for registration and education. The importance of an organisation will be seen from the following figures (B. M. J., 23rd May 1931) :—

The percentage of increase which had in the certificates of causes of deaths classified to cancer in England and Wales in each of the years 1903 to 1930, *i.e.*, since the Imperial Cancer Research Fund was started in the year 1902 taking the figures for 1902 as basis.

|      |     |       |      |     |        |
|------|-----|-------|------|-----|--------|
| 1903 | ... | 4.37  | 1917 | ... | 47.67  |
| 1904 | ... | 6.49  | 1918 | ... | 47.92  |
| 1905 | ... | 8.43  | 1919 | ... | 51.21  |
| 1906 | ... | 13.62 | 1920 | ... | 56.74  |
| 1907 | ... | 13.90 | 1921 | ... | 65.12  |
| 1908 | ... | 17.38 | 1922 | ... | 68.28  |
| 1909 | ... | 22.18 | 1923 | ... | 74.61  |
| 1910 | ... | 24.16 | 1924 | ... | 80.79  |
| 1911 | ... | 28.81 | 1925 | ... | 86.35  |
| 1912 | ... | 33.91 | 1926 | ... | 90.94  |
| 1913 | ... | 39.71 | 1927 | ... | 94.02  |
| 1914 | ... | 41.78 | 1928 | ... | 101.83 |
| 1915 | ... | 42.96 | 1929 | ... | 104.13 |
| 1916 | ... | 45.77 | 1930 | ... | 107.67 |

#### Conclusions.

- (1) A tabulation of 475 cases is given showing age, sex, regional incidence, and the areas from which they are drawn.
- (2) There is no preponderance in any particular class or community.
- (3) An attempt has been made to show that there is a constitutional predisposing factor as over weights, large heights, and derangement in carbo-hydrate metabolism.
- (4) There is a strong suspicion of an endocrine disturbance as a factor precedent or coincident with cancer.
- (5) The chronic irritation theory has been re-examined especially as regards the conditions met with in the province. Theories of Mayo and Sampson Handley have been examined,

(6) Oral cancer accounts for 50 per cent of cases in this province although stomach cancer is comparatively rare. The cause cannot be dispensed with easily as due to chewing habit. All patients with leucoplusia or tendency to that should be taken off the chewing habit. There is a certain amount of anæsthesia of buccal mucous membrane and the tissues are subject to unsuspected trauma.

(7) Cases treated with radium of all the regions of the body have been discussed with technique.

(8) The follow up system is fairly successful and the results of these follow ups are given.

(9) Radical operation supplemented with radium wherever possible must be attempted. Primary irradiation of the lesion and lymphatic area is the best; removal of lymph glands should be done only after radiation.

(10) Greater attention to pre-cancerous lesions must be paid.

(11) Propaganda for an organisation for public and professional education is necessary.

(12) The patient ought to be treated as a whole and not only the malignant growth by attention to sunlight, sleep, Vitamine D diet, administration of calcium, parathyoid, liver extract in addition to operation, and radium treatments. Radium by itself may prove disappointing. My thanks are due to Col. E. W. C. Bradfield, Col. R. G. G. Croly, the staff of the resident house surgeons of the ward of the two years, Capt. T. W. Barnard and staff, the Pathologist, the Bio-chemist, whose reports I have utilised.

## REFERENCES.

1. E. W. C. Bradfield, Col. I. M. S.—The Indian Medical Gazette, August 1930.
2. Do. Bulletin of the South Indian Medical Union, September 1930.
3. Frederick Hoffman.—Some essential Statistics of cancer morbidity throughout the world.
4. Sabesan.—Madras Medical College Magazine, 1928.
5. Newcomb Clive, Col. I. M. S.—Report No. 2166/27 dated 12th September 1927.
6. Narasimhan, N. S.—Latent Syphilis in the Population of Madras Presidency, Madras Medical Journal, July 1931.
7. Mummery Lukhart.—B. M. J. 1931, Vol. I, 199.
8. Ellis Barker, J.—"Cancer, how it is caused and how it can be prevented."
9. Waddel, L. A.—Medical Jurisprudence for India, 1930.
10. Carrey.—Medical Journal of Australia, April 1922.

11. Thomson-Shirlaw.—B. M. J., January 10, 1931.
12. McIntosh.—B. M. J. December 27, 1930.
13. Boyd —Surgical Pathology.
14. Treves and Pack.—Development of cancer in Burn Scars, Surgery, Gynaecology and Obstetrics, December 1930.
15. Janet E. Lane Claypon.—Ministry of health reports on public health and Medical subjects No. 59, H. M. Stationary office, 1930.
16. Mayo, W. J.—Cancer Problem, Surgery, Gynaecology and Obstetrics, August 1930.
17. Journal of Cancer Research, 1917.
18. Narasimhan, N. S.—Antiseptic, Madras, 1923.
19. Proceedings of the International Conference, London.—1928.
20. Do. do.
21. Blair Bell and Collaborators.—B. M. J., November 20, 1926.
22. A. T. Todd.—B. M. J., Vol. I, p. 130, 1928.
23. Narasimhan, N. S.—Lead Therapy in malignant disease, Madras Medical Journal, 1930, No. 4.
24. A. T. Todd.—Further remarks on lead treatment, Lancet, August 23, 1930.
25. J. A. Thomson.—B. M. J., May 9, 1931.
26. Sampson Handly.—Papilloma and its menace, p. 1383, Lancet, June 28, 1930.
27. Do. Lymph Stasis as the precursor of cancer, B. M. J., October 5, 1929.
28. M. J. Stewart.—Precancerous lesions of alimentary tract, Lancet, September 19, 1931.
29. Gye.—B. M. J., July 18, 1925.
30. Sir Henry Butlin.—Three Lectures on unicellula canceri—the Parasite of cancer 1912.
31. Butlin.—Treatment of malignant disease.
32. Sampson Handly.—Cancer of Breast and its treatment.
33. Waring, Sir Holbert.—Treatment of malignant disease, 1928.
34. Duane and Greenbough.—B. M. J. March 23, 1929, Kess; Surgery, Vol. VIII, 1921.
35. Souttar.—Radium and its Surgical application, B. M. J. March 23, 1929.
36. Cheatle.—Treatment of mammary carcinoma by radiation, B. M. J., May 3, 1930.
37. Bradfield, Col. I. M. S.—Indian Medical Gazette, August 1930.
38. Do. South Indian Medical Bulletin, October 1930.
39. Annual Report of General Hospital, Madras for 1930.
40. Birkett, G. E.—Radium treatment of Buccal carcinoma, British Journal of Surgery Vol. XVII, No. 67, January 1930.
41. Broders.—Buccal carcinoma. Nelson, loose-leaf Surgery.
42. Roberts, O. W.—Notes on malignant Tumours—a study of 700 cases, British Journal of Surgery, April 1930.
43. Broders.—Mayo-clinic, 9th Volume of collected papers.
44. Narasimhan, N. S.—Odontomes, Madras Medical College Magazine, 1930.
45. Hayden and Shedden.—Cancer of the rectum, Surgery, Gynaecology and Obstetrics December 1930.
46. Gordon-Watson.—British Journal of Surgery, April 1930.
47. Greenwood.—Ministry of Health Report No. 33.—The natural duration of cancer.
48. Keynes, G.—The Lancet II—108—1928.
49. Report of British Empire Cancer Campaign.—Lancet July 25, 1931.
50. Clifford Morrison.—Radium treatment of Vesical Carcinoma, the Lancet July 21, 1928.

## Excessive Leanness.

BY DR. A. SRINIVASULU NAIDU, B.A., M.D.

Little attention has been paid to this subject by the Medical Profession. Surveying the animal kingdom, one finds that the species homo is more susceptible to leanness than any one else. From time immemorial leanness has been noticed in human beings, but no definite and convincing theories have been put forward at least to give a rational understanding to the subject, which is a difficult one and shrouded in mystery. In considering this question, one has naturally to consider side by side the definitions of health, normal dimensions, vitality, reserve, etc. The definition of health is still as indefinite as infinity itself each nation, each race, each community forming groups or standards of health for judgment; still more puzzling are the definitions of normal dimensions and vitality. It is granted that the weight of a person has to bear a certain relationship to his height, nay not that much, but his girth, his breadth should be of certain proportions to the height. Here one is likely to meet with diverging constants amidst large groups of populations depending upon the variations in the several factors that go to form our concept of normal build or average proportions. Yet simple build or external proportions alone will not be compatible with internal reserve, the reserve which gives buoyancy during all time of life, and which bursts through the limitations when there is the slight sign for its demand. But before we touch upon these general questions, one has to converge one's mind towards the more accepted and traditional points of view in so far as this subject of leanness is concerned. Is it a disease or is it not?

Logan Clendening mentions that amongst human beings there are two types of bodily construction, the one herbivorous and the other carnivorous, the former being broad chested, obese, and happy looking, while the latter is narrow chested, lean and hungry looking. He also observes that the lungs of the former are vertically shorter, show lesser vital capacity than the latter who have a long narrow chest. These persons who have long narrow chests are perpetually lean in spite of the quantities of food they take, whereas the slight aliment which the obese take with great aversion is quite enough to make him more obese. What-

ever may be the diverse opinions present, there is no consensus of opinion as to why a man is lean. The possible causes of leanness may now be considered.

(1) *Anergy of growth*.—The body, as being built up from a single cell which at first exhibits only a function of growth limited by the nuclear control proportionate to the surface area, gradually grows as the result of function while it exhibits at the same time a division of labour and differentiation of function, which come into play more and more as the body reaches adult life.

Yet each daughter cell, as it diverges from its parents and exhibits more and more specialised functioning, still has the potentiality of growth in it to a limited size and shape, as predetermined by heredity and race characteristics. Even when specialised functions have been taken up by a cell, yet there lies dormant in it the power of growth through cell division, of course the daughter cells taking the place of the parent cell; but yet we see that cell grows no more than the parent cell and shows so to say a species characteristic. A doubt arises whether cells of identical organs from different individuals have identical dimensions or whether they vary within limited dimensions; whether, again, the muscle cells of a lean man are smaller, shorter and less plumpy than those of a well built man, is a point which requires elucidation. The stoutness or muscularity of an individual, again, may be due to a larger population of cells, which again proves the potentialities of growth inherent in the cell. It may also be assumed that inherited energy for growth may become gradually exhausted, being not sufficient in quantity and intensity or perhaps modified by external factors, leanness becomes marked in constitutions otherwise considered healthy. But this brings on the individual to live without sufficient reserve which again depends on proper nutrition of cell growth and cell division. It is an acknowledged fact that cells cannot grow on to any size and it is a point to be questioned whether leanness is not a hereditary character of the cells of the body not to grow to the dimensions of the cells of a plump individual.

(2) *Disproportion in the component parts of the body*.—The disproportion of bony build to muscle and fat may be responsible for unusual thinness. Very thin persons sometimes weigh fairly heavy for their height and girth and very heavy persons on the other hand show proportionately slender skeleton, especially in women, although

it is generally held that a thick set skeleton is the result of a heavy musculature. But the development of the skeleton is controlled not only by the activity of the muscles, but by the activity of internal secretions of various internal secretory organs such as the thyroid, thymus, and pituitary. In children and women we more often find the slender skeletal development of fairly, fatty and bright children. Apart from the development of bones, the disproportion between the muscular and the fatty coverings of the body may be the prominent factor in unusual thinness; people having fairly long and well-built muscles appearing lean, whereas those having the same dimensions of muscles but covered with a thicker coat of fat are more bulky and *vice versa*. Again there seems to be some relationship between muscular development and chest girth as very often it is seen that a broad chested person has better muscular development than a narrow-chested one although there may be no appreciable difference between them in heights and bony development in other parts of the body. The vital capacity and oxygen exchange does seem to have a considerable influence on muscular development.

(3) *State of nutrition*.—Nutrition again is as vague as vagueness can be. There seems to be no standard for nutrition, because everything from Chittenden's level of 5 grammes of proteins to anything most plethoric in diet is nutrition. But nutrition is so delicate a chemical mechanism that it is ill understood. The cell as the unit of life has to be nourished and nourished properly, qualitatively and quantitatively to keep alive fully and vigorously, and keep in reserve energy to meet extra demands. Hence nutrition will not only depend upon the quality of the food supplied, its physical and chemical characters, such as coarseness, uniformity, angularity, solubility, easy penetrability to digestive juices, ready convertibility into assimilable units, but upon the proper quantity, and the proper mixing up of the various food units, not omitting the much talked of vitamins. Here again one has to consider the vagaries of human mind in not having a standard diet for the world, the susceptibilities of human thought towards life and living, the creed of vegetarianism, etc., the availability of different kinds of food stuffs in different climes, the vicissitude of climate and rigors of nature to limit the wants of the palate. It is often seen that a non-vegetarian at any rate in this clime is more slenderly built than his brother the vegetarian; whether it is a disproportion in the quantity of food stuffs or whether

it is the failing culinary art that is responsible for the decadence of health and physique in the non-vegetarian, or whether it is the influence by extraneous factors upon the individual that makes him keep slim. Then, again, the problem of the secretory capacity of the digestive organs in proportion to the amount of food ingested, the activity of the digestive ferments, their physical intermixture, the reduction of the ingested food into assimilable products in desired time, the extent and activity of the absorbing surface for nutritive material and the quickness of circulation in distributing the absorbed material to the hungry working cells of the body, the capacity of the store houses for food reserves and the ability of the working cells to burn that food and utilize the energy placed at their disposal thereby increasing their reserve and their number, replacing the dead ones and wasted.

It has been distinctly noted that failure of proper nutrition may occur at any one of these links and give rise to malnutrition. A deficiency or an excess of one secretion or one ferment may adversely affect one or more of the secretions or ferments and thereby upset the entire digestive mechanism. Similarly the vehicular fluids of the ferments may by their quantity or sparingness, disturb proper digestion and assimilation. Constant maltreatment of the gastro-intestinal mucosa, by unsuitable food or by ingestion of food when it is still not ready to receive more, lowers its activity and leads to malnutrition; and this more often occurs in children through over feeding or frequent feeding by ignorant mothers. When once the gastro-intestinal mucosa is over stretched and over taxed especially in childhood, as often exemplified by pot-bellies, it can never reach the physiological efficiency with which it started work and its reserve being exhausted will always work on the margin. This state of gastric maltreatment is a fruitful source of non-muscular and under nourished manhood in India. The sequence of events leading to this catastrophe is not well realised by many. In like manner some who indulge in excessive ingestion of water, suffer from malnutrition, perhaps through the upsetting of osmotic powers of colloids and solutes in digested fluids or in blood or perhaps due to a hydroptic condition of the gastro-intestinal mucosa through excessive absorption of fluid.

Proper nutrition depends upon an efficient gastro-intestinal tract and digestion, a timely circulation to remove the intercellular fluids when not required and proportionately active pulmonary tissues to

absorb the required quantity of oxygen to liberate energy from absorbed food, and plentiful supply of tissue ferments to store up energy as tissues. On this tripod of activity rests a vigorous and healthy constitution not too bulky, not too lean, but well proportioned and properly nourished. Any upset in any of these chains or systems will at once lead on to a disturbance which makes for malnutrition, leads on to lowered vitality, impaired growth and leanness or disease. It is on these delicately balanced chemical processes in the body, rests a well developed constitution. But yet some people can take only a quantity of food which they can prescribe, but which to others looks very inadequate for their build. Yet if such only transgress their limitations, they at once find disturbance. Perhaps such people of limited capacities, have limited cell populations of organs, such as liver, pancreas, etc., some perhaps inadequate, while others can undertake extra work. These cases fall under "Want of Reserve" somewhere in their constitutions.

The subject therefore gradually takes us to a subject of cookery, and scientific cookery to the best advantage of health and life, which is not the intention of this paper to deal with.

(4) *The influence of Endocrine organs.*—The stimuli received from endocrine secretions directly or from the nervous system has a direct action on nutrition. It has been determined that the antagonism between the different sets of endocrine organs has considerable influence on nutrition. The control of blood sugar and blood pressure by the secretions of pancreas, the liberation of the same by adrenals and pituitary, the utilization of food units by tissues for growth, under the influence of thyroid, pituitary, gonads and thymus are not unknown subjects. These organs seem also to directly influence gastro-intestinal secretions, which again are controlled by blood sugar and other available food products in blood. Injection of insulin conserves blood sugar, but also stimulates the outpouring of gastro-intestinal juices and ferments. This same effect is obtained by a fall of blood sugar. Even the control of motility of stomach and its evacuation seem to be controlled by the variation of nutritive elements in the blood, the contents moving on when blood sugar falls, and stagnating when blood sugar is high. From this it is seen how delicate is the science of nutrition and how important is the scientific preparation of food stuffs.

(5) *Diseases.*—That intoxications anywhere in the body, septic foci liberating poisons or their agents into the food stream or blood stream, progressive catarrh and thickening and fibrosis of gastro-intestinal mucosa through faulty alimentation or disease, diseases of circulatory system and of respiratory system of blood or excretory systems indirectly affect nutrition or exhaust the cellular activity and thereby cause malnutrition, are factors well known to everyone.

I beg to invite debate on this most important and imperative of all subjects in the realm of medicine, as a virile population cannot be expected to spring from malnourished individuals. My sincere thanks to all who would co-operate with me in solving the problem of leanness.

## Case Reports.

### Specific Labarynthitis.

*Case 1.* Kumaran. H. M. 24 yrs. Complaint—Deafness both ears. Duration two months.

*Previous History.*—Had severe headache and vomiting three years back lasting for four months.

*Present History.*—Had giddiness and vomiting seven months back recurring again two months back. Increasing deafness for last one and half months. Now total deafness.

*Present condition.*—Intelligence and memory good. Nystagmas present. Muscle power good. No loss of sensation. No rombergism. No hypotonia. No ataxia. Jerks normal. E. N. T. Report, total nerve deafness both ears. C. S. Fluid very much under pressure. Albumin 54.3 mgr. Globulin 38.7 mgr. Sugar. 0.65 per cent. 'Lange's test. Paretic Curve 33 33 21,0000. Weak positive.

*Diagnosis.*—Specific labarynthitis.

### Progressive Muscular Atrophy.

*Case 2.*—Chellaya Chetty H. M. 50 yrs. Complaint—Difficulty in walking, speech and deglutition three yrs. Began with wasting of hands coming on gradually, then the face, then the legs.

At present he has wasting of almost all muscles of the body including those of the tongue. Spastic paraplegia of lower limbs.

*Diagnosis.*—Progressive muscular atrophy (Bulbar & amyotrophic lateral sclerosis types).

### Chorea.

*Case 3.*—Govindaswami 13 yrs. H. M. Complaint—Difficulty in talking and involuntary movements for last one month.

History of rheumatism two years back with coexisting Chorea recovery after two months. Now for the last two months he is having involuntary movements, slurring speech, difficulty in deglutition. Pain

## Case Reports

63

in limbs and back. Heart enlarged. Pulse rapid. Ataxia. Weakness of voluntary movements. Emotional instability.

*Diagnosis.*—Chorea.

### A Case of Acute Lymphatic Leukaemia.

BY S. K. SUNDARAM B.A., M.D.,  
Headquarters Tanjore Hospital.

Sampoornam, a girl 11 years old was admitted into the Medical Wards of the Raja Mirasdar District Head Quarters Hospital, Tanjore, on the 3rd April 1931 with complaint of general weakness, increasing pain in left hypochondrium (15 days), more or less continuous fever (10 days), bleeding from the gums (6 days). The child was said to have been quite fit and to have been attending school till 15 days back. There was no family history of importance. There was no bleeding elsewhere except for a few drops of blood in the stools one day.

The girl was very anæmic, with spongy, sloughing, bleeding gums. Cervical lymph glands were enlarged, especially over the left side, soft, freely moveable, not adherent to skin. Retromandibular and Submaxillary glands were enlarged too. Axillary and inguinal glands were palpable. There were no petechiae over any part of the body.

The spleen was palpable  $2\frac{1}{2}$  fingers below the costal margin and was tender, with a somewhat hard margin. Liver could be felt a finger's breadth below the costal margin.

There was hæmic murmur and basal congestion.

Blood smear was examined and was full of large lymphocytes, suggestive of lymphoblasts, practically no granular cell of any kind. Dr. T. S. Tirumurthi, Professor of Pathology, Medical College, Vizag., to whom a slide was sent for opinion was kind enough to give the following reports.

"The microscopical appearances are typical of lymphoid leukaemia. The great majority of the cells are large lymphocytes. Many megaloblasts and normoblasts are seen. Very few granular myelocytes."

There was no time to make any further examination, for the patient died on the night of admission at 2-30 a.m.

I am indebted to Lt-Col. A. P. G. Lorimer, I.M.S., the Superintendent of the Institution, for his permission to report this case perhaps worth recording because of its marked acute onset and course.

## Extracts.

### SPRUE.

A very instructive study of the radiographic findings in nine cases of sprue by Pillai (M. J. S.) and Murthi (K. N.) is recorded. The number is small, since among the nine were acute, subacute, chronic and advanced cases, but if the findings are confirmed they will mark an advance in our knowledge of this disease.

In acute cases there was no indication of loss of tone or motility or other change in stomach or intestines. The stomach was empty 2 hours after the barium meal, the hepatic flexure of the colon was reached in 3 hours, and the intestine empty in 6—8 hours. In the subacute, there was slight loss of tone and vigour of peristalsis of the stomach with consequent delay there and again in the caecum and colon, though the small intestine rapidly emptied itself. Retention of barium in spots in the upper part of the caecum is interpreted as evidence of ulceration. Chronic cases gave similar signs but to a great degree; the gastric loss of tone and motility was more marked and the barium lay like a pool in the viscus. The small intestine showed no local patches (ulcers), but the caecum was dilated and the transverse colon in one patient contained a pool of barium "like a hammock." There were diverticula in the colon containing barium, especially in the first part of the caecum, and, in the advanced cases, the hepatic and splenic flexures. The authors explain this by saying that concurrently with atrophy of the mucosa, there is fibrotic change in the muscular tissue, the circular fibres being affected before the longitudinal. In three advanced cases the liver was small.

Where ulceration of the mouth and upper part of the alimentary tract was present there were no signs of ulceration of the lower bowel, and where the barium showed diverticular ulcers or inflammation of the colon and lower bowel there was little or no affection of the mouth and upper part of the alimentary tract. The cases may thus be divided into "descending" and "ascending", according to the authors, who regard the former as oral infection spreading down and associated with achlorhydria, and the latter as travelling from the colonic flexures through

## Extracts

65

the caecum upwards. In the former metabolism is much interfered with and milk is not tolerated; vice versa in the latter. It was noted also that the barium seemed to have a beneficial effect, possibly by changing the acid colonic contents to alkaline and so affecting the bacterial flora, and partly also by coating the tract and lessening absorption of toxins. At all events the character of the stools underwent a change and the patients stated that they felt better. (The nationality of the patients is not stated, nor details of the symptoms, but no doubt is thrown by the authors on the correctness of the diagnosis. No mention is made of any of these patients coming to autopsy, and the inferential structure built up appears to be somewhat larger than the foundation will support at present. Doubtless further investigation will be made on these lines.—*Tropical Diseases Bulletin*, January 1932.

Van Steenis has experimented with the duodenal sound the state of contents of pyloric sphincter and found that it is not firmly contracted but that duodenal contents, could regurgitate into stomach and disturb the gastric functions. He also found by an analysis of faeces that protein and carbohydrate digestion was adequate but that fat digestion is always disturbed, the stool showing much fat, acid, soaps and some neutral fat and in diarrhoea the neutral fat is increased. The characteristic of stool, containing fat, fat acid, soaps and air bubbles or soap bubbles, being specifically lighter rises to surface and is called rising stool and its colour being due to fat the causes of disturbance in the intestines may be, (1) microbic, (2) chemical fermentation, (3) deficiency in ferments. The last theory is abandoned. It has also been found that the constituents and the total quantity of bile is reduced in equal proportions, except bile salts, which is absent in blood, urine and faeces; perhaps it is not formed. The same is found in bacillary dysentery. A cure is effected more rapidly by administration of bile salts. Anaemia variable in quantity and in time of appearance, resembling that of Pernicious anaemia but different in nature appears; the former being relatively aplastic, the latter relatively haemolytic.

| Differentiation. | Sprue.                  | Pen.<br>anaemim. |                   |                               |
|------------------|-------------------------|------------------|-------------------|-------------------------------|
| Aneths count.    | 62.1                    | 32.45            | Haemolytic        | } Malcomsan<br>and<br>Murthi. |
| Neutrophil       | 2-3-4                   | 5-6-7            | strepto           |                               |
| leucocytes.      | Segment.<br>Vacuolated. | larger           | and B.<br>Welchi. |                               |

|               |                                                                     |                            |
|---------------|---------------------------------------------------------------------|----------------------------|
| Vanden Bergh. | Indirect positive.<br>$\frac{1}{2}$ to 2 units.<br>Hypochlorhydria. | Momlia Psilosis (debated). |
|---------------|---------------------------------------------------------------------|----------------------------|

—(A. S. NAIDU.)

## Official Items.

Our hearty congratulations to Rao Bahadur Dr. M. Kesava Pai, *O.B.E.*, Rao Bahadur Dr. P. K. Warriar and Vaidyaratna Dr. G. Srinivasamurti, for the well-merited honours conferred on them and to Dr. P. K. Koshy, *F.R.C.P.*, for the rare distinction bestowed on him. Dr. Koshy is first of the Madras Provincial Service to be honoured with the *F.R.C.P.*

## Editorial.

### THE REORGANIZATION OF MEDICAL EDUCATION.

For some time past, there has been a considerable amount of feeling gathering ground that the subject of Medical Education in India should be tackled on broad lines and that a definite policy should be laid down by the Medical Profession with a view to give a lead to those responsible to so shape the curricula of medical education that India may have a system whereby irritating differences will disappear and a uniform minimum qualification may be prescribed. At the outset, we may state that the problems of Medical Education are not unique for India, although there are certain problems perhaps which are unique in India and which do not disturb other countries. In general, however, it may be said that to-day every country is acutely conscious of the fact that there is a much lee-way yet to be made up in the shaping of the policy of Medical Education. Our readers might probably be aware that there is a Committee unofficially working towards this end, organized through a leading medical journal, and some of the opinions thus far gathered, go far to show that considerable dissatisfaction prevails as to the methods adopted for turning out graduates in Medicine in Great Britain as well. We do not propose however to deal with this larger issue at present, but we wish to confine ourselves to a recent manifesto issued by one of the leading medical practitioners of the City, and an interesting paper read before a Medical Association on the subject of Medical Education.

Unfortunately, as we said, there are problems peculiar to this country which do not find a place in other countries. In Great Britain, the minimum registrable

### Editorial

69

qualification is laid down, and all those that get this or any other qualification, are on the same footing of equality initially, so that there can be no question of superiority or inferiority at the initial stages. Thus, the L. R. C. P. & S., and the M.B. start more or less on the same footing and while the opportunities available to the one may not be available to the other in later years, still, each one has got a ladder to climb up and can come to the top of the profession. It is this democratic feeling in the medical profession, where every member feels like the soldier of Napoleon's army that he carries a Field Marshal's baton in his knapsack, which is required in the Medical Profession of India to-day. The segregation into compartments is unwise and unfortunate, and creates fissiparous tendencies in the profession. We feel that this has largely tended to diminish the utility of the profession as a whole and that to-day it cannot be said, with any satisfaction, that on any large issue the profession has got a united voice.

We believe that it is just because of these difficulties that recently the University of Madras came forward and we think in a very generous mood to supply the incentive for those among the Licensed Practitioners who had the energy and the will and the skill to rise higher in the ladder. It is true even those proposals have been subjected to a certain amount of criticism; but we venture to believe that if the critics had considered other aspects of the question, had realised the difficulties which other Universities place before Licentiates in the matter of giving University degrees, if, we say, our critics had appreciated the fact that the Madras University was the first of its kind and, at present, the only one which had thrown its portals wide open to the Licentiates and had gone to the utmost extent possible to make the degrees of the University accessible to them—we feel sure that such critics will,

far from indulging in such criticism, because of individuals and individual feeling of resentment, turn round and appreciate the work that had been done by the University. But we are not going to dilate upon this aspect of the question at present. We feel that the last decision of the Academic Council in regard to the general educational qualifications needed for the Licentiates must go a long way to satisfy all except the hyper-critical of the genuineness and the good spirit with which the University has approached this difficult question. Nor should we forget, in this connection, the very helpful attitude that the Principal of the Medical College has adopted in regard to affording facilities for the candidates who seek admission under such circumstances.

The question of a uniform single qualification has two aspects to be considered. In the first place, the problem is, how far facilities ought to be afforded to those who have already obtained a qualification which at present is not recognised as coming up to the higher standard? And in the second place, what changes may be introduced to see that the future entrants, at any rate, do not suffer from this handicap? We have already stated that so far as the first problem is concerned, the University has given a lead, and in regard to the other bodies, whether Government or quasi-Government, it may be that facilities may be available to such practitioners as have already got the qualification, not to be forced to go to foreign countries with a view to obtaining the minimum qualification, but to get it in their own country.

The problem of the future is a problem that ought to demand a more careful investigation. We have noted the various suggestions that have been placed before the public; we have appreciated also the spirit in which the students themselves have come forward with the demand that the percentages required for securing a pass ought to be raised.

We are glad of that spirit; and we welcome such a spirit. We congratulate them on the bold step they have taken, but we feel that the problem remains yet unsolved. It is an interesting parallel on this occasion to dwell on the changes that were introduced into the now defunct L. M. & S. degree of the University of Madras. Prior to 1914, the L. M. & S. was a four year course, and a few of the medical experts of that day believed that if the L. M. & S. were made a five year course and all subjects then taught for the M. B. Degree were taught for the L. M. & S. as well, the L. M. & S. would then become a registrable degree and would command respect in all other countries. With this end in view, the L. M. & S. was made a five year course, the subjects which were not taught in the first year were introduced; the same examination was conducted with the same papers and the same examiners—with this difference that those who got 50 per cent of the total marks were awarded the M. B. Degree, while those who got over 40 per cent were awarded the L. M. & S. Degree. A couple of years after this change was introduced, the Medical Faculty of the University of Madras found, to its consternation, that the General Medical Council would have none of these changes and continued to refuse recognition for the L. M. & S. Degree. It may be interesting at the present day, and in view of the correspondence that has gone on between the General Medical Council and the Government of India since 1928, we say it may be interesting for our readers to know that the Medical Faculty of the day, which was composed entirely of British qualified practitioners, resolved to address the Government of India to adopt retaliatory measures, to suspend recognition of British degrees and to appeal to the Privy Council, if necessary. Other counsels, however, seem to have prevailed in the end and the matter was dropped, till in the year 1924 the question was again taken up, this time, by indigenous practitioners, and thanks

largely to Dr. Guruswami Mudaliar and others, the University of Madras, in the teeth of the unanimous opposition of the British practitioners, decided to abolish the L. M. & S. Degree. The fierce controversy that raged in the newspapers of the day may, perhaps, be within the memory of most of our readers. The irony of the situation was that after the abolition of this degree, Sir Norman Walker, who visited this country in 1926, actually complimented the University of Madras on the abolition of the L. M. & S. Degree without cognisance of the history of this fateful decision.

We referred in the previous paragraphs at some length to the changes introduced into the L. M. & S. Degree and to the final abolition of that degree by the University of Madras, a step which we venture to think has been appreciated ever since as a very wise one indeed. We would earnestly commend to the attention of those who wish to improve the status of the Licentiates in this country this standing example before them. No change in the regulations for the award of the L. M. P. Diploma is going to solve this problem; no tinkering with percentages will really affect the status of the licensed practitioner; it will not really improve the status of the Licensed Medical Practitioners unless all such changes are directed towards one end in view, which end ought to be guaranteed, that it will confer upon the licensed medical practitioner the same rights and privileges, as far as registration and practice is concerned, as we hope the University graduate will come to enjoy in this and other countries. Let us not be misunderstood. A higher percentage for a qualifying examination undoubtedly means better standards, better equipped products, and an all round, better qualified practitioner. But the grievance of the practitioner,—and that is the point we wish to emphasise,—will still be there, if in spite of all this training, he is dubbed an inferior and

not treated as a person who holds the minimum registrable qualification for purposes of reciprocity with any other country. The L. M. & S. graduate, if we may once again refer to this incident, is still bewailing his fate, and has had no remedy suggested for him. Should the licensed medical practitioner follow in the same footing and suffer likewise?

What then is the remedy? To our mind, there seems to be only one remedy. We hope that ere long the All-India Medical Council will become a *fait accompli* and we fervently hope, with those essential changes to which we have referred in previous articles, and which the country as a whole has demanded from time to time—when the All-India Medical Council comes into being, we feel that that Council should lay down the minimum registrable qualification, not only for practice in this country, but for demanding reciprocal recognition in other countries; and then, whoever is responsible for the future of the L. M. P., should be in a position to improve it to the standard necessary for obtaining that minimum recognition. It may be that improvement may be needed in the general qualification; it may be that improvement may be needed so far as years of study are concerned; it may be that improvement may be needed in regard to the subjects and the detailed curricula and the percentages required for passes; but our chief contention is that when we are going to change the L. M. P., let us change it so decidedly that there can be no question whatsoever of attaching an inferior status to the L. M. P. of the future, and for this we plead with all the earnestness at our command, because we are most interested that hereafter in this country there should be but one minimum registrable qualification.

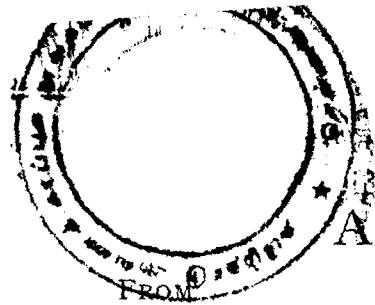
A suggestion has been made, which seems to us well worthy of consideration, so far as conditions in Southern India are concerned—whether if all these changes are

made, it may not be possible to have just one University qualification instead of duplicating medical qualifications. Our sincere opinion is that Southern India is fit for such a change, whatever may be the feeling and opinion held out in regard to other provinces. If two qualifications are considered desirable, there can be no harm, provided, as we have said, that the two qualifications are treated absolutely on a footing of equality and that opportunities are available for the duly qualified person in both places for higher studies and higher qualifications with a view to secure better recognition in the selected pursuits of the medical profession.

Lastly, may we suggest that the time is come when Medical Education in this country should be viewed broadly and by a sound body of experts. We are aware that the Government is acutely conscious of the feeling that is prevalent in a large body of medical men for a change in this direction and we are also deeply grateful to the representative of the Government, the Hon'ble the Chief Minister, for the interest that he has taken in the problems of Medical Education. We venture to make an appeal that at present we have in the head of the administration a person who has a very intimate knowledge of Medical Education and it should be possible for the Government to appoint a committee to go into this question thoroughly and to lay down the broad principles on which Medical Education should develop in the future. There is a feeling that if better products are turned out, rural medical relief will suffer. We entirely disagree and we can, with confidence, assure the public that the question of supply and demand will automatically adjust itself; that there is no gainsaying the fact that whatever may be the qualification fixed, it is the individual who has to select his sphere of activity; that financial conditions are so bad that if for rural medical relief any

*Editorial*

earnest attempt is made to get medical practitioners with a suitable living wage, there would be no difficulty to secure them from the ranks of the higher qualified practitioners. The bogey therefore that a higher qualification spells concentration in city life to the neglect of rural medical needs, does not appeal to us. We may conclude by hoping that now that the ball has been set in motion, attempts will be made early, even before the inauguration of the All-India Medical Council, so that the Local Government may be prepared to place their scheme of Medical Education and to get the All-India Medical Council to approve of the same and to go forward with those changes which are so essential to unify the profession, to improve its standards, and to better the medical relief of the general public.



## Association Notes.

MAJOR-GENERAL C. A. SPRAWSON, C.I.E., V.H.S., I.M.S.,  
SURGEON-GENERAL WITH THE GOVERNMENT OF MADRAS,  
*Madras.*

To

THE PRESIDENT,  
MADRAS MEDICAL ASSOCIATION.

SIR,

I have the honour to forward herewith a copy of G. O. No. 1328  
P. H. Ms.\*, dated 21st June 1932 for your information.

I have the honour to be,

Sir,

Your most obedient servant,

(Sd.) P. K. WARRIER,

*Personal Assistant for Surgeon-General  
with the Government of Madras.*

\*Copy of G. O.

ORDER :—

The deputation of the members of the Madras Medical Association which waited on the Hon'ble the Chief Minister on the 29th March 1932 made the following requests, viz. :—

- (1) that the Madras Medical Service should be recognised as a homogeneous service for purposes of retrenchment of personnel ;
- (2) that in case officers are retired after 25 years of service, their claim for full pension should be recognized ;
- (3) that the reduction in the cadre should be spread over several years and be given effect to gradually as and when vacancies arise after absorbing the thirteen probationers already discharged on account of retrenchment ;

JL  
Lm 211, N21MM N32.14.3