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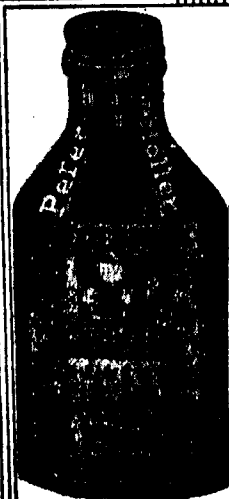
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# JOURNAL OF SOUTH INDIAN MEDICINE

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## SOME ELEMENTS OF NEUROLOGY(2)

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### SENSATION

On the sensory side, a simple increase or a simple diminution alone, either general or special, is not evidence of organic disease. Hypersensitive-ness to light, to sound, or to cutaneous stimuli, or loss of any of these sensations, either partial or complete, may be a purely functional phenomenon—and, indeed, some forms of this are by no means rare in hysteria. There are, however, in these cases special qualitative features which suggest functional rather than organic disease. Thus, anaesthesia of the limbs usually presents the so-called "glove" and "stocking" form. Dissociation of sensation, as observed in syringomyelia and other diseases, is always evidence of organic change. It may very easily be overlooked unless carefully looked for. With regard to quantitative features, any preponderance of sensory over motor signs renders a functional diagnosis most probable, and *vice versa*.

If the patient is stupid, do not rely too much on sensory results, as he is incapable of a correct appreciation of the various tests. Even in the intelligent patient responses are very variable.

Diseases in which there are no objective sensory signs are progressive muscular atrophy, amyotrophic lateral sclerosis, disseminated sclerosis, lead palsy, Landry's paralysis, and uncomplicated cerebellar disease.

**The Investigation of Sensation :**

1. Pain; 2. Touch; 3. Temperature; 4. Conscious muscle sense.

**I. Pain.**

Test with pin.

1. *Pain* is the subjective sign of irritation; lightning pains are pathognomonic of tabes.
2. *Hyperalgesia*, or resentment of pain, is the objective sign of irritation.
3. *Analgesia* is the sign of destruction.

**II. Touch.**

Test with cotton-wool for localization and discrimination.

1. *Paraesthesia*, i.e., queer feelings of touch, etc., is the subjective sign of irritation.
2. *Hyperaesthesia*, i.e., touch and they complain of pain, is the objective sign of irritation.

Cortical anaesthesia is less profound than capsular; it is more marked at the periphery of the limb. Hysterical anaesthesia is psychic and often dependent on the patient's impressions rather than on anatomical considerations. The French say that it is due mainly to suggestion by the examining physician. Dissociated anaesthesia, i.e., loss of pain and temperature and retention of touch, is very characteristic of syringomyelia. It is also found in unilateral lesions of the cord, and in lesions of the cerebello-pontine angle.

**III. Temperature.**

Test (1) With hot (not hot enough to cause pain) and cold test-tubes.

(2) Blow on skin for cold and breathe on skin for hot, if no test-tubes available.

1. *Queer temperature sensations*—subjective sign of irritation.
2. *Hypothermia*—objective sign of irritation.
3. *Thermo-anaesthesia*—sign of destruction.

**MUSCLE SENSE**

Muscle sense is of two kinds:

- (1) *Conscious muscle-sense* to cerebrum enters consciousness.
- (2) *Unconscious muscle-sense* to cerebellum and Deiter's nucleus.

Loss of either results in awkward movements, i.e., in ataxia or inco-ordination. Loss of conscious muscle-sense results in dynamic or locomotive ataxia; loss of unconscious muscle-sense or *tone* in static ataxia.

**IV. Testing for conscious muscle sense.**

1. With the eyes shut, put into different positions the limbs and then the toes (big toes).
2. *Finger to nose test* is also a test for intention tremor. Incidentally, no single type of irregular movement of muscle—clonic jerks, tonic contraction, choreiform and athetotic movements, tremors of all kinds—can be said by itself to signify organic disease.
3. Heel to knee test.
4. Vibration sense.
5. *Romberg's sign*: This sign is apt to be fallacious as evidence of organic disease unless very carefully elicited. It is easily suggested to the suggestible patient: indeed, a much examined hysteric will sometimes begin to sway before the true test begins.
6. Ataxia.

# THE URINE AND BLOOD PRESSURE OF HEALTHY STUDENTS

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A systematic investigation of the urine and blood pressure was made in a group of apparently healthy students of Madras. The results of the investigation are given below.

All the subjects of investigation were students either from the Medical College or from one of the Arts Colleges, and ranging in age from 18 to 29 years. The morning sample of urine was collected, between 6 and 7 A. M., and examined at 9 A.M. The blood pressure was taken the previous night in every case with the student in the *sitting* posture and the arm resting horizontally. The right arm was chosen for taking the blood pressure. The urine was centrifuged for five minutes at 2,000 revolutions per minute.

The general habits of the subjects varied widely: some were good athletes, some indifferent, and others positively bad at sports; while many were of very studious temperament. Almost all of them were teetotallers, but most of them indulged in smoking.

Of the 232 students examined, 121 were *vegetarians* and 111 *non-vegetarians*, all of them living in Hostels.

The reaction of the urine was acid in all cases, and almost all of them showed a few squamous as well as renal epithelial cells, and a few leucocytes and red blood cells (2 to 3 cells in a slide). The specific gravity was mostly between 1.008 and 1.020, while the maximum noted was 1.030 and the minimum 1.002.

Of the 121 samples of urine from vegetarians examined, 37 showed traces of albumin, 47 had phosphates, 20 had oxalates and 5 showed hyaline casts. 15 of these had both albumin and phosphates, 5 phosphates and oxalates, 2 albumin and oxalate, 5 albumin, phosphates and oxalate, while in 45 none of these constituents were detected. The corresponding figures among the non-vegetarians were: 43 with traces of albumin, 56 with phosphates, 26 with oxalates, and one with hyaline casts. In this group of non-vegetarians, the urine of 18 contained both albumin and phosphates, 10 contained phosphates

and oxalate, 7 albumin and oxalate, 2 albumin, oxalate and phosphates, while 45 were free from any of these constituents. Of the whole group of both vegetarians and non-vegetarians, 45 had indican in their urine. Here it may be mentioned that the test employed for albumin was the *heat test*, and a faint cloudiness which did not disappear on the addition of acetic acid was taken as indicating the presence of albumin. The *nitric acid test* was not positive in these cases which showed only a faint cloudiness.

*Six students had casts in their urine*—one 19 years old, three 20 years old, one aged 22, and one aged 24. Three of these had traces of albumin, two had phosphates, and one had both albumin and phosphates. Their systolic blood pressure ranged from 106 to 145 mm. Hg., while the diastolic varied from 70 to 86 mm. Hg. Of these six, five were busy studying for their sessional examinations and consequently keeping late nights at the time the observations were made. Whether this is to be taken only as a coincidence, or whether it offers an explanation for the presence of the hyaline casts in the urine can be only a matter for conjecture with the meagre data on hand.

ALLEN and ALVAREZ say "..... there would seem to be little doubt that blood pressure readings that are to be used for statistical purposes should always be accompanied by a record of the temperature of the environment at the time of the study." It is, therefore, worth while stating that during the period in which these investigations were made, *i.e.*, July 30th to September 7th, 1934, the climatic conditions were practically the same except for a few showers: the atmospheric temperature having been uniform during that period, ranging between 90 and 100 degrees Fahrenheit.

A careful study of the blood pressure readings reveals the fact that age for age the vegetarian students have a higher individual as well as average blood pressure (both systolic and diastolic) than the non-vegetarian students. This is certainly against the traditions that have been handed down for ages, but at the same time it cannot be purely a coincidence. The family history of some of these individuals with a high blood pressure did not reveal any hereditary influence, and in only one case was there a history of an occasional indulgence in alcohol. But these figures could not be compared with the figures obtained for non-vegetarians in Europe, because here the non-vegetarians take fish or meat but occasionally and that too in small quantities.

While dealing with the question of blood pressure, it will be interesting to record the observations of other investigators, especially as to how

it is influenced by posture, emotions, position of the arm as well as the particular arm used, climate and temperature, and, finally, the habits of the individuals.

SEWAL and GHRIST found on passive change of position from the recumbent to the erect position no significant change in the systolic pressure, but the diastolic rose on an average about 12 mm. In CRUICKSHANK'S group the average blood pressure readings in the recumbent position were 112 systolic/78 diastolic, while in the sitting posture they were 103 systolic/78 diastolic. When the change of posture is an active one, brought about by the subject's own muscles, the systolic pressure is raised, while with both passive and active change of position the diastolic pressure rises.

Emotion, especially feelings of pleasure, anger, fright, excitement and general nervousness, tends to raise the blood pressure. Generally, the blood pressure reading taken at a first interview is often, or almost invariably, higher than the readings taken on subsequent occasions. GALLAVARDIN and HAOUR, in a study of 100 persons, found a systolic pressure 25 to 35 mm. higher at the first reading than later when the subjects had become accustomed to the procedure. This is certainly of considerable interest.

KHAN noted in a study of 27 normal persons an average fall of 55 mm. in the systolic pressure when he raised the arm from the dependent to the vertical position. KAY and GARDNER found in 25 out of 125 cases significant differences between the readings in the two arms. STEPHENS observed that the blood pressure tends to be on the average from 3 to 4 mm. higher in the right than in the left arm.

"The studies of ALVAREZ and STANLEY.....indicate that the more or less constant use of alcohol does not permanently affect the blood pressure. If anything, it causes it to be lower in the later years of life."

Tobacco does not seem to have much permanent effect on blood pressure. According to ALVAREZ and STANLEY, non-smokers have slightly lower pressure than smokers. JANEWAY noted slight increase during smoking, while, according to JOHNSON, the act of smoking slightly lowers the pressure.

FOSTER found that the average systolic pressure was 8 to 14 mm. lower in China than in America. Forty members of the staff of the Peking Medical College showed a mean pressure 9 mm. lower when in China than what it was when they were living in America. BROWN noted a tendency to low readings in warm weather.

Of the 232 cases examined, 26 showed a systolic blood pressure of over 130 mm.—16 vegetarians and 10 non-vegetarians—and 8 of them had a systolic pressure of over 140 mm.—5 vegetarians and 3 non-vegetarians. The maximum systolic pressure recorded was 156 mm. Five of these had a diastolic pressure of 100 mm. and above—4 vegetarians and 1 non-vegetarian—and 33 had 90 mm. and above in the ratio of 20 vegetarians to 13 non-vegetarians. The maximum diastolic pressure noted was 110 mm. Similar results have been obtained by others.

The following account from a recent contribution by ALLEN and ALVAREZ is of interest in this connection: "Alvarez was surprised to find so many boys and college students with high pressure and at first rather doubted the accuracy of his measurements, but his observations have since been confirmed by several investigators working in different colleges. It now seems probable that there is an unusual degree of lability of blood pressure among boys and youths about the ages of 17 and 18 years. This may perhaps be due to a greater sensitiveness of sympathetic nerves or to a greater responsiveness to emotion, and to such excitement as is occasioned by a physical examination. Twenty-two per cent. of the male freshmen and 2 per cent. of the female freshmen at the University of California were found to have a systolic pressure exceeding 140 mm. As was shown by Diehl and Sutherland, many of the high pressures are not constant and do not represent true hypertension. They doubtless have some significance in regard to the later health of the individual, but only time will tell what it is."

In this series, 11 out of the 26 with high pressure were between 20 and 21 years of age.

Of the 80 cases which showed traces of albumin, some at least could be accounted for by the fact that the concerned students were subjected to more than usual physical strain as they were taking part in tournaments. Oxalates are probably due to the Hostel diet which is rich in cabbages, cauliflower, carrots, tomatoes, etc.

It is noteworthy that casts were practically absent, being present only in six out of the 232 subjects, and that the casts found were only of the hyaline variety.

#### Acknowledgments:

My thanks are due to Dr. M. R. Guruswami Mudaliar, B.A., M.D., C.M., under whose supervision this analysis was done and for whose kind advice I cannot be too grateful. I wish to thank also Professor A. N. Goyle, M.B., PH. D., for allowing me to work in his Laboratory, Dr. D. Govinda Reddi, M.D., for assisting me in my work, and the students, who formed the subjects, for their hearty co-operation.

| No.                   | Blood Pressure. | Specific Gravity. | Albumin. | Phos. | Oxalate. | Casts.  |
|-----------------------|-----------------|-------------------|----------|-------|----------|---------|
| <b>AGE 18 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 1                     | 110-70          | 1014              | —        | +     | —        | —       |
| 2                     | 142-100         | 1020              | —        | —     | —        | —       |
| 3                     | 134-90          | 1008              | Trace    | —     | —        | —       |
| 4                     | 124-88          | 1010              | —        | —     | —        | —       |
| 5                     | 100-65          | —                 | Trace    | +     | —        | —       |
| 6                     | 110-80          | 1010              | —        | —     | —        | —       |
| 7                     | 110-74          | 1014              | Trace    | +     | —        | —       |
| 8                     | 136-70          | 1012              | —        | +     | —        | —       |
| 9                     | 114-64          | 1010              | Trace    | +     | +        | —       |
| 10                    | 128-78          | 1014              | Trace    | —     | —        | —       |
| 11                    | 110-60          | 1006              | —        | —     | —        | —       |
| 12                    | 116-72          | 1002              | —        | —     | —        | —       |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 13                    | 114-66          | 1020              | —        | —     | —        | —       |
| 14                    | 110-65          | 1012              | Trace    | +     | —        | —       |
| 15                    | 120-85          | 1004              | —        | +     | —        | —       |
| 16                    | 116-75          | 1020              | —        | +     | +        | —       |
| 17                    | 120-76          | —                 | —        | +     | —        | —       |
| 18                    | 118-82          | 1020              | —        | +     | —        | —       |
| 19                    | 108-68          | 1018              | —        | +     | +        | —       |
| 20                    | 112-64          | 1008              | Trace    | +     | —        | —       |
| <b>AGE 19 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 21                    | 122-86          | 1020              | Trace    | +     | +        | —       |
| 22                    | 122-92          | 1014              | Trace    | +     | —        | —       |
| 23                    | 110-75          | 1012              | —        | —     | —        | —       |
| 24                    | 108-70          | 1020              | Trace    | —     | —        | —       |
| 25                    | 124-75          | 1012              | —        | +     | —        | —       |
| 26                    | 110-76          | 1010              | Trace    | +     | —        | —       |
| 27                    | 124-72          | 1020              | Trace    | +     | —        | —       |
| 28                    | 114-70          | 1022              | —        | +     | —        | Hyaline |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 29                    | 98-58           | 1016              | —        | —     | —        | —       |
| 30                    | 122-75          | 1020              | —        | +     | +        | —       |
| 31                    | 140-96          | 1030              | —        | —     | +        | —       |
| 32                    | 110-70          | 1020              | —        | —     | +        | —       |
| 33                    | 110-66          | 1016              | —        | —     | +        | —       |
| 34                    | 118-74          | 1022              | —        | —     | +        | —       |
| 35                    | 100-80          | 1010              | —        | +     | +        | —       |
| 36                    | 120-78          | 1014              | Trace    | +     | —        | —       |
| 37                    | 110-72          | 1020              | —        | +     | —        | —       |
| 38                    | 106-72          | —                 | —        | +     | —        | —       |
| <b>AGE 20 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 39                    | 110-72          | 1010              | —        | —     | —        | —       |
| 40                    | 124-90          | 1010              | —        | —     | +        | —       |
| 41                    | 110-75          | 1020              | —        | —     | +        | —       |
| 42                    | 128-85          | 1018              | —        | —     | +        | —       |
| 43                    | 108-76          | 1016              | —        | —     | +        | —       |
| 44                    | 102-84          | 1014              | Trace    | +     | —        | —       |
| 45                    | 125-80          | 1016              | —        | +     | —        | —       |

| No.                   | Blood Pressure. | Specific Gravity. | Albumin. | Phos. | Oxalate. | Casts.  |
|-----------------------|-----------------|-------------------|----------|-------|----------|---------|
| <b>AGE 20 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 46                    | 118-80          | 1010              | —        | —     | —        | —       |
| 47                    | 130-92          | 1026              | —        | +     | —        | —       |
| 48                    | 102-76          | 1010              | —        | +     | —        | —       |
| 49                    | 120-74          | 1008              | Trace    | +     | —        | —       |
| 50                    | 125-95          | 1016              | —        | +     | —        | —       |
| 51                    | 122-90          | 1016              | —        | +     | —        | —       |
| 52                    | 120-71          | 1020              | Trace    | —     | —        | —       |
| 53                    | 115-80          | 1018              | —        | +     | —        | —       |
| 54                    | 110-80          | —                 | Trace    | +     | —        | —       |
| 55                    | 122-90          | 1018              | —        | —     | —        | —       |
| 56                    | 146-78          | 1012              | —        | —     | —        | —       |
| 57                    | 118-76          | 1010              | —        | —     | —        | Hyaline |
| 58                    | 132-78          | 1018              | Trace    | —     | —        | Hyaline |
| 59                    | 106-78          | 1012              | —        | —     | —        | —       |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 60                    | 120-84          | 1012              | —        | +     | —        | —       |
| 61                    | 120-76          | 1016              | —        | —     | —        | —       |
| 62                    | 136-80          | 1012              | —        | +     | —        | —       |
| 63                    | 110-68          | 1020              | —        | —     | —        | —       |
| 64                    | 110-75          | 1010              | —        | —     | —        | —       |
| 65                    | 115-65          | 1014              | Trace    | —     | —        | —       |
| 66                    | 120-84          | 1022              | Trace    | +     | —        | —       |
| 67                    | 108-75          | 1022              | Trace    | +     | —        | —       |
| 68                    | 130-90          | 1024              | —        | —     | —        | —       |
| 69                    | 122-90          | 1012              | —        | +     | —        | —       |
| 70                    | 120-78          | 1014              | —        | +     | —        | —       |
| 71                    | 90-60           | 1010              | Trace    | +     | —        | —       |
| 72                    | 112-75          | 1012              | Trace    | —     | —        | —       |
| 73                    | 106-72          | 1018              | Trace    | —     | —        | —       |
| 74                    | 112-65          | 1012              | Trace    | +     | —        | Hyaline |
| 75                    | 98-64           | 1010              | —        | +     | —        | —       |
| 76                    | 112-68          | 1014              | —        | —     | —        | —       |
| 77                    | 100-74          | 1010              | —        | —     | —        | —       |
| 78                    | 136-75          | 1022              | Trace    | —     | —        | —       |
| 79                    | 110-70          | 1012              | Trace    | —     | —        | —       |
| <b>AGE 21 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 80                    | 110-65          | 1012              | —        | —     | —        | —       |
| 81                    | 115-65          | 1006              | Trace    | —     | —        | —       |
| 82                    | 116-80          | 1014              | —        | —     | +        | —       |
| 83                    | 120-75          | 1020              | —        | —     | +        | —       |
| 84                    | 110-68          | 1010              | —        | —     | —        | —       |
| 85                    | 114-74          | 1020              | —        | —     | —        | —       |
| 86                    | 130-78          | 1022              | —        | +     | —        | —       |
| 87                    | 120-82          | 1012              | —        | —     | —        | —       |
| 88                    | 142-78          | 1020              | —        | —     | —        | —       |
| 89                    | 108-75          | 1030              | —        | —     | —        | —       |
| 90                    | 110-80          | 1020              | —        | +     | +        | —       |
| 91                    | 108-76          | 1026              | —        | +     | +        | —       |
| 92                    | 122-64          | 1010              | Trace    | +     | +        | —       |
| 93                    | 120-88          | 1008              | —        | —     | +        | —       |
| 94                    | 114-82          | 1018              | —        | +     | —        | —       |
| 95                    | 115-70          | 1016              | —        | +     | —        | —       |
| 96                    | 136-90          | 1020              | —        | +     | —        | —       |

| No.                   | Blood Pressure. | Specific Gravity. | Albumin. | Phos. | Oxalate. | Casts.  |
|-----------------------|-----------------|-------------------|----------|-------|----------|---------|
| <b>AGE 21 YEARS</b>   |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 97                    | 142-110         | 1012              | —        | —     | —        | —       |
| 98                    | 126-74          | 1012              | —        | —     | —        | —       |
| 99                    | 110-75          | 1012              | —        | —     | —        | —       |
| 100                   | 130-105         | 1016              | Trace    | +     | —        | —       |
| 101                   | 118-78          | 1010              | —        | +     | —        | —       |
| 102                   | 100-62          | 1010              | —        | +     | +        | —       |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 103                   | 108-66          | 1010              | —        | —     | +        | —       |
| 104                   | 110-75          | 1020              | —        | +     | —        | —       |
| 105                   | 115-75          | 1016              | —        | —     | —        | —       |
| 106                   | 117-65          | 1010              | —        | —     | —        | —       |
| 107                   | 116-95          | 1010              | —        | —     | +        | —       |
| 108                   | 110-80          | 1010              | —        | —     | —        | —       |
| 109                   | 110-70          | 1008              | Trace    | +     | —        | —       |
| 110                   | 115-70          | 1016              | Trace    | +     | —        | —       |
| 111                   | 115-95          | 1020              | —        | —     | —        | —       |
| 112                   | 110-75          | 1014              | —        | —     | —        | —       |
| 113                   | 118-90          | 1020              | Trace    | —     | +        | —       |
| 114                   | 115-80          | 1018              | —        | +     | —        | —       |
| 115                   | 98-52           | 1008              | Trace    | +     | —        | —       |
| 116                   | 96-58           | 1012              | Trace    | —     | +        | —       |
| <b>AGE 22 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 117                   | 110-64          | 1008              | —        | +     | —        | —       |
| 118                   | 132-90          | 1014              | Trace    | —     | —        | —       |
| 119                   | 110-70          | 1010              | Trace    | —     | —        | —       |
| 120                   | 104-68          | 1014              | Trace    | +     | —        | —       |
| 121                   | 118-70          | 1012              | Trace    | —     | —        | —       |
| 122                   | 118-80          | 1010              | —        | —     | —        | —       |
| 123                   | 138-100         | 1010              | Trace    | +     | —        | —       |
| 124                   | 118-90          | 1006              | —        | +     | —        | —       |
| 125                   | 112-80          | 1010              | —        | +     | —        | —       |
| 126                   | 116-80          | 1014              | —        | —     | +        | —       |
| 127                   | 122-90          | 1008              | Trace    | —     | —        | —       |
| 128                   | 126-90          | 1020              | Trace    | +     | —        | —       |
| 129                   | 98-66           | 1016              | —        | —     | +        | —       |
| 130                   | 122-86          | 1014              | Trace    | +     | —        | —       |
| 131                   | 122-80          | 1018              | Trace    | +     | —        | —       |
| 132                   | 118-80          | 1020              | Trace    | +     | —        | —       |
| 133                   | 118-90          | 1008              | Trace    | —     | +        | —       |
| 134                   | 122-78          | 1018              | —        | —     | —        | —       |
| 135                   | 110-85          | 1020              | —        | —     | —        | —       |
| 136                   | 124-86          | 1010              | —        | +     | —        | Hyaline |
| 137                   | 118-80          | 1018              | Trace    | +     | +        | —       |
| 138                   | 100-60          | 1008              | —        | —     | —        | —       |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 139                   | 100-65          | 1010              | —        | +     | —        | —       |
| 140                   | 114-76          | 1016              | —        | —     | —        | —       |
| 141                   | 104-70          | ...               | Trace    | —     | —        | —       |
| 142                   | 140-105         | ...               | Trace    | —     | —        | —       |
| 143                   | 114-70          | 1008              | —        | —     | —        | —       |
| 144                   | 110-70          | 1014              | —        | +     | —        | —       |

| No.                   | Blood Pressure. | Specific Gravity. | Albumin. | Phos. | Oxalate. | Casts.  |
|-----------------------|-----------------|-------------------|----------|-------|----------|---------|
| <b>AGE 22 YEARS</b>   |                 |                   |          |       |          |         |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 145                   | 124-90          | 1010              | Trace    | +     | —        | —       |
| 146                   | 125-80          | 1012              | Trace    | +     | —        | —       |
| 147                   | 126-88          | 1010              | Trace    | —     | —        | —       |
| 148                   | 110-75          | 1018              | —        | —     | —        | —       |
| 149                   | 110-70          | 1018              | Trace    | —     | —        | —       |
| 150                   | 106-75          | 1010              | —        | —     | —        | —       |
| 151                   | 110-72          | 1020              | Trace    | —     | +        | —       |
| 152                   | 115-78          | 1012              | Trace    | —     | +        | —       |
| <b>AGE 23 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 153                   | 114-76          | 1012              | Trace    | —     | —        | —       |
| 154                   | 158-78          | 1020              | —        | —     | —        | —       |
| 155                   | 110-70          | 1014              | —        | +     | —        | —       |
| 156                   | 118-78          | 1012              | Trace    | —     | —        | —       |
| 157                   | 100-62          | 1014              | Trace    | —     | —        | —       |
| 158                   | 112-80          | 1014              | —        | —     | —        | —       |
| 159                   | 118-86          | 1020              | Trace    | —     | —        | —       |
| 160                   | 98-60           | 1010              | —        | —     | —        | —       |
| 161                   | 118-76          | ...               | —        | —     | —        | —       |
| 162                   | 116-75          | 1020              | —        | +     | —        | —       |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 163                   | 104-64          | 1018              | —        | +     | +        | —       |
| 164                   | 110-78          | ...               | —        | +     | +        | —       |
| 165                   | 110-72          | 1012              | —        | +     | +        | —       |
| 166                   | 92-60           | 1012              | —        | +     | —        | —       |
| 167                   | 112-70          | 1008              | —        | +     | —        | —       |
| 168                   | 130-90          | 1020              | —        | +     | —        | —       |
| 169                   | 132-90          | 1016              | Trace    | —     | —        | —       |
| 170                   | 116-70          | 1014              | Trace    | —     | +        | —       |
| 171                   | 134-82          | 1012              | —        | +     | —        | —       |
| 172                   | 116-70          | 1013              | —        | —     | —        | —       |
| <b>AGE 24 YEARS.</b>  |                 |                   |          |       |          |         |
| <b>VEGETARIAN</b>     |                 |                   |          |       |          |         |
| 173                   | 126-80          | 1010              | —        | —     | —        | —       |
| 174                   | 110-72          | 1020              | —        | —     | —        | —       |
| 175                   | 124-80          | 1012              | —        | —     | —        | —       |
| 176                   | 118-80          | 1020              | —        | —     | +        | —       |
| 177                   | 120-90          | 1022              | —        | —     | —        | —       |
| 178                   | 100-70          | 1010              | —        | +     | —        | —       |
| 179                   | 130-94          | 1020              | —        | —     | —        | —       |
| 180                   | 120-80          | 1010              | —        | —     | —        | —       |
| 181                   | 118-84          | 1010              | —        | +     | —        | —       |
| 182                   | 115-70          | 1010              | —        | —     | —        | —       |
| 183                   | 120-84          | 1014              | —        | +     | —        | —       |
| 184                   | 128-86          | 1014              | Trace    | +     | —        | Hyaline |
| <b>NON-VEGETARIAN</b> |                 |                   |          |       |          |         |
| 185                   | 108-68          | 1018              | —        | +     | +        | —       |
| 186                   | 110-78          | 1018              | Trace    | —     | —        | —       |
| 187                   | 122-88          | 1012              | —        | —     | —        | —       |
| 188                   | 128-78          | 1010              | —        | +     | +        | —       |
| 189                   | 110-75          | 1014              | Trace    | —     | +        | —       |

| No.                    | Blood Pressure. | Specific Gravity. | Albumin. | Phos. | Oxalate. | Casts. |
|------------------------|-----------------|-------------------|----------|-------|----------|--------|
| <b>AGE 24 YEARS</b>    |                 |                   |          |       |          |        |
| <b>NON-VEGETARIAN</b>  |                 |                   |          |       |          |        |
| 190                    | 115-70          | 1012              | Trace    | —     | —        | —      |
| 191                    | 128-90          | 1016              | Trace    | +     | —        | —      |
| 192                    | 112-80          | 1010              | —        | —     | —        | —      |
| 193                    | 124-82          | 1020              | —        | +     | +        | —      |
| 194                    | 140-90          | 1010              | Trace    | +     | +        | —      |
| 195                    | 132-86          | 1018              | —        | +     | —        | —      |
| 196                    | 110-68          | 1010              | Trace    | +     | —        | —      |
| 197                    | 110-68          | 1010              | Trace    | —     | —        | —      |
| <b>AGE 25 YEARS.</b>   |                 |                   |          |       |          |        |
| <b>VEGETARIAN</b>      |                 |                   |          |       |          |        |
| 198                    | 138-86          | 1014              | —        | —     | +        | —      |
| 199                    | 110-82          | 1006              | —        | —     | —        | —      |
| 200                    | 122-84          | 1012              | —        | —     | —        | —      |
| 201                    | 104-76          | 1016              | —        | —     | —        | —      |
| 202                    | 102-70          | 1010              | —        | —     | —        | —      |
| 203                    | 125-90          | ...               | —        | +     | —        | —      |
| 204                    | 116-78          | 1024              | Trace    | +     | +        | —      |
| 205                    | 116-82          | 1004              | Trace    | —     | —        | —      |
| <b>NON-VEGETARIAN</b>  |                 |                   |          |       |          |        |
| 206                    | 110-85          | 1018              | —        | —     | —        | —      |
| 207                    | 95-58           | 1010              | —        | —     | —        | —      |
| 208                    | 108-82          | 1018              | Trace    | —     | +        | —      |
| 209                    | 114-70          | 1012              | —        | —     | —        | —      |
| 210                    | 120-82          | 1016              | —        | +     | —        | —      |
| 211                    | 123-75          | 1012              | Trace    | +     | —        | —      |
| 212                    | 122-75          | 1012              | —        | +     | —        | —      |
| 213                    | 115-75          | 1008              | Trace    | +     | —        | —      |
| 214                    | 110-75          | ...               | —        | +     | —        | —      |
| 215                    | 120-80          | 1010              | —        | —     | —        | —      |
| 216                    | 112-82          | 1010              | —        | +     | —        | —      |
| 217                    | 98-68           | 1018              | Trace    | +     | —        | —      |
| 218                    | 124-86          | 1010              | Trace    | +     | —        | —      |
| 219                    | 100-65          | 1020              | —        | —     | —        | —      |
| <b>AGE 26 YEARS.</b>   |                 |                   |          |       |          |        |
| <b>VEGETARIAN</b>      |                 |                   |          |       |          |        |
| 220                    | 126-86          | —                 | —        | —     | —        | —      |
| <b>NON-VEGETARIAN</b>  |                 |                   |          |       |          |        |
| 221                    | 110-82          | 1018              | Trace    | —     | —        | —      |
| <b>AGE 27 YEARS.</b>   |                 |                   |          |       |          |        |
| <b>VEGETARIAN</b>      |                 |                   |          |       |          |        |
| 222                    | 110-65          | 1010              | —        | —     | —        | —      |
| 223                    | 116-88          | 1014              | —        | —     | —        | —      |
| <b>NON-VEGETARIAN;</b> |                 |                   |          |       |          |        |
| 224                    | 108-75          | 1022              | Trace    | —     | —        | —      |
| 225                    | 115-75          | 1010              | Trace    | —     | —        | —      |
| 226                    | 114-82          | 1020              | —        | —     | —        | —      |
| 227                    | 112-80          | 1018              | —        | —     | —        | —      |
| 228                    | 124-86          | 1010              | —        | —     | —        | —      |

| No.               | Blood Pressure.        | Specific Gravity. | Albumin.   | Phos.    | Oxalate.      | Casts. |
|-------------------|------------------------|-------------------|------------|----------|---------------|--------|
| AGE 28 YEARS.     |                        |                   |            |          |               |        |
| VEGETARIAN        |                        |                   |            |          |               |        |
| 229               | 125-80                 | 1010              | —          | —        | —             | —      |
| 230               | 124-80                 | 1012              | —          | —        | —             | —      |
| NON-VEGETARIAN    |                        |                   |            |          |               |        |
| 231               | 128-98                 | 1020              | —          | —        | —             | —      |
| 232               | 125-80                 | 1010              | Trace      | —        | —             | —      |
| RESUME OF RESULTS |                        |                   |            |          |               |        |
| Diet.             | No. of cases examined. | Albumin.          | Phosphate. | Oxalate. | Hyaline cast. |        |
| Vegetarian        | ...                    | 121               | 37         | 47       | 20            | 5      |
| Non-vegetarian    | ...                    | 111               | 43         | 56       | 24            | 1      |
| Total             | ...                    | 232               | 80         | 103      | 44            | 6      |

#### COMPARISON OF AVERAGE BLOOD PRESSURE OF VEGETARIANS WITH THAT OF NON-VEGETARIANS

| Age.                 | Vegetarians. | Non-vegetarians.      |
|----------------------|--------------|-----------------------|
| 13 years to 17 years | 118'5-83'5   | 110-70 (Not reported) |
| " 18 years           | 119'5-76     | 115-73                |
| " 19 years           | 117-77       | 114'5-74              |
| " 20 years           | 119-81       | 114-74                |
| " 21 years           | 119-75       | 111-75                |
| " 22 years           | 118-80       | 115-77                |
| " 23 years           | 116-74       | 115-75                |
| " 24 years           | 119-81       | 119-78'5              |
| " 25 years           | 117-81       | 112-76                |
| 26 to 29 years       | 120-80       | 117-83'5              |
| Average of total     | 118-79       | 114-76                |

#### CASES SHOWING HYALINE CASTS.

| Diet.          | Age. | Blood pressure. | Reaction. | Albumin. | Phosphate. | Oxalate Indican. | Remarks.                                         |
|----------------|------|-----------------|-----------|----------|------------|------------------|--------------------------------------------------|
| Vegetarian     | 22   | 110-85          | acid      | ...      | ...        | ...              | ...                                              |
| Do.            | 20   | 146-78          | "         | ...      | ...        | ...              | Christian College, appearing for sessional exam. |
| Do.            | 24   | 128-86          | "         | Trace    | ...        | ...              | ...                                              |
| Do.            | 19   | 114-70          | "         | ...      | ...        | ...              | ...                                              |
| Do.            | 20   | 132-78          | "         | Trace    | ...        | ...              | ...                                              |
| Non-vegetarian | 20   | 106-72          | "         | Trace    | ...        | ...              | ...                                              |

# GLEANINGS FROM MEDICAL LITERATURE.

1

## RENAL TUBERCULOSIS.

J. B. MACALPINE, M.B., F.R.C.S.,

*Post-Graduate Medical Journal, November 1935, 403.*

Five points merit discussion in the pathology of renal tuberculosis.

1. *Which is the organ first invaded?* The view was held for a long time that the bladder was the primary seat of the disease and that the kidney infection was secondary. The view now universally accepted that the kidney is invariably the organ to be first involved and that the infection travels to the other parts of the urinary tract subsequently is based on the following facts:—

(1) The finding of a lesion within the kidney in certain cases before there is any other discoverable lesion in the remainder of the tract.

(2) In many cases the degree of advancement of the renal disease points to its having preceded that in any other part of the system.

(3) Following nephrectomy there is a strange tendency for the bladder to heal completely and where this is incomplete there is at least an amelioration of the condition.

2. *How does infection reach the kidney?* In an organ through which the whole blood of the body passes several times an hour infection can easily be haematogenous. Also many simple infections of the kidney are blood-borne. Retrograde infection of the kidney *via* lymphatic channels from the lung is a view which is no longer held.

The main objections to the now accepted view, namely, that the infection is blood-borne, are:—

(1) That in the great majority of instances (9 out of 10) the disease is unilateral.

(2) The statement which has for a long time survived in surgical literature that there is no single instance known of a healed tuberculous focus in the kidney.

The pioneer work of MEDLER has, however, shown that bacilli circulating in the blood cause microscopic lesions in the kidney quite unrecognisable unless serial sections are cut. The vast majority of these heal leaving no microscopic evidence of their previous existence. Occasionally one runs an unfavourable course and develops further, generally in the cortico-medullary region, ultimately causing destruction of the gland. Far from tuberculous lesions of the kidney not healing, it would appear that the majority of primary lesions heal in the first instance, leaving no trace: but once a focus has got out of hand it proceeds unchecked. This would also explain why the disease is usually unilateral. The original bacillaemia causes multiple bilateral lesions, all of which are overcome in one kidney, and probably all but an odd one in the diseased organ.

3. *What are the macroscopic appearances?* These vary with the virulence of the infection, the susceptibility of the patient, the tendency to calcification and the degree of obstruction which develops in the ureter.

The commonest type of renal tuberculosis is the ulcero-cavernous type, the original focus being at the base of a pyramid, usually at the pelvis. The pelvis is affected, the papillae are attacked and a return infection to the interior of the kidney sets in. The kidney at this stage shows microscopically lymphatic lines of tuberculosis extending through the parenchyma to the capsula under which they radiate and send off shoots to the peri-renal fat. Some of those in the renal parenchyma go on to the formation of fresh caverns so that the disease is not limited to the site of the original focus. In this way multiple cavities which have eroded the medulla drain into the pelvis—the ulcero-cavernous variety. The disease is however very pleomorphic, and important variants are:

(a) *The pelvic type* with pronounced manifestations in the pelvis leading to considerable ulceration of the papillae. Sometimes this type causes severe haematuria.

(b) *The chronic type* leading to fibrosis of the organ. Stenosis of the ureter is common and thick pus accumulates in the kidneys. Contents of the kidney are very prone to calcification resulting in the so-called pulty kidney. This type is easily recognised in the radiogram.

(c) *The septic type* where the superadded septic infection causes rapid destruction of the parenchyma and the pus is thin and foetid.

4. *The microscopic appearances* which are of no clinical importance.

5. *How does the disease spread in the tract?* The ureter undergoes the same processes as the pelvis: submucosal tubercles caseation ulceration. At first it is *dilated*, due to muscular invasion, leading to dysfunction. The walls are oedematous, fibrotic and palpably thickened. Later sclerosis and contraction set in causing a localised stricture or even obliteration of the lumen over a considerable distance. More constantly contraction occurs along the long axis, recognisable cystoscopically and in a urogram.

*The bladder* is invaded somewhat later by the constant stream of infected urine which pours over the trigone and directly from the infected intramural ureter which is among the most severely damaged portions of the tube. The thin curtain of tissue separating the ureter from the bladder ulcerates away and the ureteral opening appears as an irregular crateriform gaping orifice with moth-eaten margins. From here the disease spreads to the fundus and middle—the trigone is more resistant—and to the roof by contact when the bladder is empty.

An important and constant feature is the extension of the ulceration to the deeper coats causing rapidly progressive diminution in the capacity of the bladder which becomes hypertonic and accepts only 7, 5, 3 or even fewer ounces of urine.

*Symptoms.*—The majority of these are due to the disease in the bladder, the kidney itself remaining silent throughout the course of the disease in 85 per cent of the cases. In the remaining 15 per cent two types of pain may occur with about equal frequency.

- (1) A transitory colic due to ureter being blocked by pus, calcareous debris or blood clot.
- (2) A localised and usually quite unimportant loin pain due to peri-renal inflammation.

Some degree of polyuria and bacilluria no doubt occurs early in the disease but is usually overlooked. The bladder symptoms are those of cystitis, and the following points enable differentiation from other forms of cystitis:—

- (1) The insidious nature of the onset—acute invasions being sudden in onset.
- (2) The steady and progressive evolution, little influenced by treatment, to an extreme degree of vesical irritation and tenesmus, pain and frequency of micturition becoming eventually intolerable.

The malady runs an afebrile course with little impairment of general health. It occurs equally in either sex and on either side. The 3rd and 4th decades are the periods of maximum incidence.

*Investigation of a Case.*—Suggestive symptoms should lead to a determined search for the tubercle bacillus. When this has been discovered the side of the lesion and the function of the other kidney should be determined.

- (1) This is done by:

Cystoscopy, separate renal function examinations, examination of the separated urines, and instrumental pyelography.

Retrograde pyelography is the more thorough procedure: it gives detailed information not obtainable by excretion urography. It is however a formidable procedure with a small, irritable, intolerant bladder.

In the cystoscopic examination a greatly reduced bladder capacity, a well-developed cystitis, ulceration and the almost pathognomonic golf-hole ureteric orifice claim attention.

Excretion of dyes and examination of the separated urines determine the side of the lesion and the capacity of the other kidney.

- (2) Excretion Urography may be especially of use when the bladder condition is very bad in determination of the side of the lesion and the function of the other kidney.

*Treatment* is nephrectomy given a good kidney on the other side. Under no circumstance should the kidney be incised for diagnostic purposes. Regarding the ureter some confine their operation to the removal of the upper end of the ureter; others believe in taking out the entire length. For the most part the former procedure would be adequate, and results in satisfactory healing of the rest of the ureter much in the same way as the bladder heals.

*Results* vary with the stage at which the disease has come under notice. In the best cases there is an almost immediate cessation of the frequent micturition.

The mortality of the operation is about 1·5 per cent and confined to cases with densely adherent kidneys and like operative disadvantages.

M. K.

## 2. CONSERVATION OF THE CIRCULATION IN BONE AND JOINT SURGERY

WILLIS C. CAMPBELL

*Surgery, Gynecology and Obstetrics, 1934, LVIII, 116.*

The circulation undoubtedly should be duly regarded in surgery of all tissues, but the soft tissues are more resourceful in the restoration of blood supply when rendered deficient by operative procedures, a pathological process, or trauma than is bone and cartilage. Bone is by no means an inert tissue but has an abundant blood supply, and one of its chief functions is the storage of calcium with a constant interchange with the blood stream to maintain the proper calcium-phosphorus balance for every cell in the body. But the structure of bone is such as to retard revascularization. Hyaline cartilage which forms the articular surface has practically no blood vessels, and consequently has very little restorative power *per se*. When the articular cartilage is injured or the source of nutrition, which is from the blood, is severed, there is either degeneration with denudation or repair by invasion of blood vessels and the formation of fibrocartilage or fibrous tissue, thus permanently impairing the quality over the area involved.

The physiological repair of bone requires in the adjacent soft structures from which the circulation is derived an abundant blood supply; in consequence, the old adage, "Keep close to the bone," in operative procedure for the purpose of avoiding large nerves and blood vessels and to secure better mechanical restoration, often defeats the object by destroying the means.

The blood supply to bone is derived from the nutrient artery and from the periosteum through the attachment of soft structures. The vessels from the periosteum are probably of more importance in the process of repair than the nutrient artery. When the blood supply to an area of bone becomes obliterated, either aseptic necrosis or sequestration occurs, or there remains sufficient nutrition to keep the part alive but not to instigate the process of repair. In intracapsular fractures of the neck of the femur, the main supply is severed at the line of fracture, and the only source is from the small vessels in the ligamentum teres which may be sufficient to maintain a living head, but not to permit callus production, or there may not be sufficient supply from this source and the head may become an aseptic sequestrum. Repair then can occur only by invasion of the sequestrum by new bone.

The practical importance of this subject may also be illustrated in all phases of bone and joint surgery; in fractures, and whenever bone is incised for any purpose, there must be an area of stasis between the fragments, surrounded by one of active circulation. If at the time of trauma there is extensive crushing of the soft structures, or if at operation there is extensive stripping of the periosteum and soft parts, healing will be impaired proportionately to the damage. In compound fractures the area of stasis or blood clot is extended and often there is also injury to the surrounding structures and repair is notably materially retarded.

In dislocations, the blood supply may be impaired with subsequent degeneration of the articular cartilage and sequestration of a large portion of the adjacent bone. This has frequently been observed in the hip joint, the roentgenogram showing at the time of dislocation perfect

reduction, but after months or years later gross irregularity by sequestration and disintegration. In unreduced dislocations of the shoulder and elbow after the lapse of a few weeks the cartilage at open operation shows evidence of fibrillation and degeneration which is often advanced to such a degree that restoration to normal may not occur even after reduction.

In extensive operations upon the knee joint, as in arthroplasty, a much better exposure can be secured by stripping the periosteum for a considerable distance from the lower extremity of the femur. This undoubtedly facilitates mechanical reconstruction of all parts, but later there may be sequestration on the particular surface of the femur and such gross irregularity that even though active motion is secured the purpose of the procedure is defeated. No defect in the articular surface of the tibia is ever noted, for the attachments of the soft structures are not disturbed.

In the hip joint the entire head and neck of the femur may disappear in the same manner when there is too extensive dissection of the soft structures. The acetabulum is rarely, if ever, affected as there is sufficient blood supply from the inner surface of the pelvis to maintain contour; therefore, extensive denuding of the external surface of the ilium to secure exposure is permitted with impunity.

In osteochondritis dessicans of the knee in which an aseptic sequestrum is formed in the articular surface of the internal condyl of the femur and a loose body is extruded into the joint, a small artery, the arteria media, in the posterior crucial ligament, is probably occluded, thus obliterating circulation to this part. If, however, as occasionally occurs, this sequestrum, through irritation, becomes attached to the synovial membrane, revascularization occurs and the sequestrum is transformed into active living bone—a beautiful natural illustration as to the behaviour of free bone grafts. The same manifestations have been observed in the head of the astragalus after fracture of the neck and after excision and replacement.

In all operative procedures upon bones and joints the incision and approach should be so devised that the circulation is impaired as little as possible. In the knee a sufficient exposure for all purposes may be secured by a linear incision parallel with the quadriceps tendon, patella, and patellar tendon, but a more tedious procedure is required to reach all recesses. Transverse, U, and other complicated incisions give a better exposure but necessitate severance of important structures. In operations upon fractures of the long bones it is much better to secure only a 50 per cent end-to-end engagement than to destroy the most potent means of repair, even though a perfect anatomical restoration may be secured.

There are other factors to be considered, as the constitutional status of the patient, secretion of certain ductless glands as the parathyroid and calcium-phosphorus balance, vitamins, and focal infections. However, from a practical point of view the problem has been found a local one in a large percentage, which is chiefly controlled by the local blood supply, which if impaired will result either in sequestration or in a much retarded process of repair.

K. R., C H.

## 3.

## PUERPERAL ECLAMPSIA

EDWARD LACY KING

*Texas State Journal of Medicine, XXXI, December 1935, p. 503.*

Eclampsia is a toxæmia affecting the pregnant, parturient or puerperal woman, of unknown etiology, characterized by convulsions and coma, with definite pathological findings, which frequently terminates in death. It can very often be prevented by proper prenatal care, intensive treatment of toxæmia, with induction of labour in those failing to show satisfactory improvement. Once eclampsia has developed, a conservative plan of treatment should be adopted and carefully followed. In an occasional case, caesarean section, under local or spinal analgesia, may be performed.

### Methods of Treatment: A Summary

#### STROGANOFF TREATMENT

1. On admission, morphia gr. 1/6 to 1/3.
2. One hour after admission, chloral hydrate, grains 30, by rectum in 100 cc. milk and 100 cc. normal saline.
3. Three hours after admission, repeat morphine.
4. Seven hours after admission, repeat chloral.
5. Thirteen hours after admission repeat chloral, grains 20.
6. Twenty-one hours after admission, repeat chloral, grains 20.
7. Venesection, 400 cc. of blood, if 3 or more convulsions. If delivery is imminent, venesection should not be done.
8. Absolute quiet, avoidance of all irritation.
9. All manipulations and examinations under chloroform.
10. After control has been secured, induction of labour by reapture of membranes.
11. Delivery normally, or by forceps or by version.
12. Keep warm; oxygen after convulsions. Keep mouth and nose clear of fluid. Administration of fluids. Digitalis, if pulse 110 or over.

#### DUBLIN (ROTUNDA) TREATMENT.

1. Morphia gr. 1/4. May be repeated.
2. Gastric lavage, leaving purgative in stomach.
3. Colonic irrigation, using from 4 to 5 gallons of sodium bicarbonate solution. Repeat about every 8 hours.
4. Hypodermoclysis of sodium bicarbonate solution.
5. Heat to loins.
6. Keep on side; keep air passages free of fluid.
7. Induction of labour and conservative delivery.

## SCHWARZ-DORSETT METHOD

1. Twenty-five per cent magnesium sulphate intramuscularly—5 to 10 cc. first then other doses up to 20 or 25 cc.
2. Morphia gr.  $\frac{1}{4}$ .
3. Gastric lavage and colonic irrigation as in Dublin method.
4. Usually conservative vaginal delivery.
5. Occasional abdominal caesarean section if patient does not improve.

## SODIUM AMYTAL TREATMENT

1. Morphia gr.  $\frac{1}{4}$ , on admission.
2. Sodium amytal, gr.  $7\frac{1}{2}$ , by vein, immediately after this.
3. Repeat sodium amytal, gr. 3, every 4 hours, by rectum or by mouth.
4. Repeat morphia if restless or if more convulsions.
5. Infusion of 500 cc. 20 per cent. glucose after patient is quiet. Repeat in from 8 to 12 hours.
6. Watch for pulmonary oedema; if present, atropine sulphate, gr.  $\frac{1}{75}$ , and repeat as needed.
7. Induction of labour 24 to 36 hours after admission, if not in labour.
8. Normal delivery, or by forceps or version.
9. Gas, local, sacral, or spinal analgesia. No other.

## LAZARD TREATMENT

1. Twenty cc. 10 per cent solution magnesium sulphate intravenously every hour until convulsions are controlled.
2. Usual adjuvant measures.
3. No gastric lavage, purgative or enema.

## MILLER AND MARTINEZ METHOD

1. Intravenous injection of liver extract (heparmone).
2. Usual adjuvant treatment.

## JOURNAL OF SOUTH INDIAN MEDICINE

FEBRUARY 1936

## THE XII ALL-INDIA MEDICAL CONFERENCE

The Medical Profession apart from the Medical Services is yet not an organized body in India. The Independent Profession is struggling to organize itself in the various provinces, in some places a little more successfully than in others. There are many problems where the Profession as a whole, whether in service or not, is interested. It is, therefore, important that members from all the provinces should meet to discuss their difficulties and to think out plans to remove these obstacles. As such, the All-India Medical Conference which meets under the auspices of the Indian Medical Association is a very useful institution. And in choosing Dr. U. Rama Rau to preside over the Conference this year Madras has been honoured. A Licentiate himself, he is the head of a family which has a number of Licentiates and Graduates in Medicine. He is, therefore, in the very happy position of being able to say things without being misunderstood as biassed and partial to any one group. The address which he has delivered at the Conference deserves the thoughtful attention of all medical men and legislators who are interested in the progress of medical relief and medical education in this country.

People often see epochs in every event and irremediable disasters in every enactment. We are not of such heroic mould. From various causes we have not kept pace with other countries in many departments. We have been content to regard existing institutions as perfect. But we are waking up; we realize our lag and are in a hurry to rectify it. We do many things, and more things are made for us. Some of them are useful, more often they are incorrect. The truth of our observation could be seen in all things from medical relief in the villages to special hospitals in the presidency Town, from the education of the compounder to that of the University Medical Graduate, and in the organization of expensive and elaborate Research Institutions.

Dr. Rama Rau is one of the few pioneers who glimpsed these defects a generation ago and sought to remedy them. Some of the defects have been removed. But unfortunately other and new mistakes have crept in. Such a state of affairs makes one despair. And we suspect that Dr. Rama Rau has almost come to the end of his patience and rightly despairs of rectifying the defects in the organization and administration of the Medical Department.

A good portion of his address is devoted to a detailed consideration of the Medical Council of India. To one who has worked so hard to create such a body, the constitution of the Council and its powers should certainly be disappointing. We fully agree with him that an official-ridden Council could hardly be much more than a mouth-piece of the Government. It is, therefore, easy to condemn it off-hand. But when one considers the function of the Council, namely, the supervision of the maintenance of the standard of Medical Education, it is difficult to imagine occasions when the attitude of the Government could be different from that of the Public. True, there may be exceptional circumstances when such differences might arise, especially the attitude of this country *vis a vis* the General Medical Council of Great Britain. Naturally, the Government looks up to the General Medical Council for guidance, and the guidance is not always demonstrably in the interests of this country. But the remedy for this would be for India to be entirely indifferent about the General Medical Council. But the Profession as a whole still feels flattered by the approval of the General Medical Council, and humiliated by its frown. Even public men often keep comparing institutions in this country by the standards of the above Council. While this mentality persists it is rather unfair to demand of the Medical Council of India the degree of robust independence which public men like Dr. Rama Rau desire in certain moods.

The real drawback of the Medical Council of India is the nominated official member. We do not object to the official or his being nominated. But it is certainly pernicious to keep

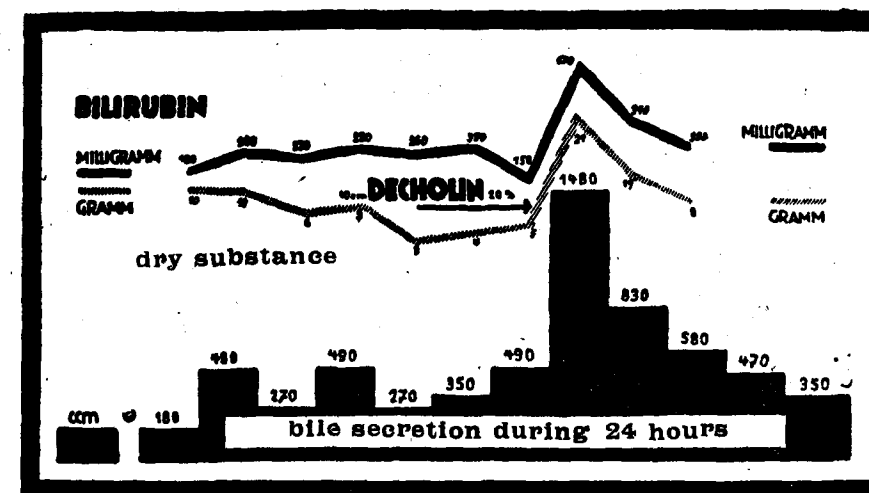
changing these official members from time to time. We are not exaggerating when we say that many nominated members attend only one session of the Council, for, before another session comes their places are taken by another set of members who are most often ignorant of the previous work of the Council. Further, some of these members are not very conversant with affairs of medical education. If the Government still think that such a large number of official members is necessary they should at least see that those whom they nominate are fairly familiar with problems of medical education, and that they are not replaced by others too frequently. At the end of his address devoted to a consideration of the Indian Medical Council Dr. Rama Rau makes the suggestion that the present Act should be amended by deleting the references to "higher qualifications" in the preamble of the Act. We entirely agree with him. The Medical Council should concern itself only with the minimum qualifying standard. And the minimum standard recognized to be necessary for the proper equipment and education of dependable medical practitioners is that of the present University pass qualification. Dr. Rama Rau agrees with us in this view; for, later in the part of his address dealing with medical education he suggests that the present Licentiate Course should be abolished and that better arrangements should be made for the training of medical men. The existence of Medical schools is merely an index of financial deficiency. There is general agreement that their perpetuation is undesirable at the present time. It is to be hoped that the public would work strenuously for their abolition without further delay.

Dr. Rama Rau devotes considerable space for the discussion of the Indian Medical Service. He has rightly criticized some of the defects in the recruitment and has stressed the injustice that is perpetrated by the strong racial bias that is obvious in the rules of recruitment and distribution of officers. The President of the previous year's Conference had also dealt with these aspects in a particularly long speech. We can easily understand and sympathize with the attitude of the men in Service. They expect to enjoy the best of both the worlds. But we look for a

better appreciation of the situation from public men of the type of Dr. Rama Rau. It seems so difficult to avoid a certain amount of confusion in the discussion of this subject of the Indian Medical Service. While the number of Indians in this service was small public men agitated for its abolition. But now that a larger number of Indians is employed therein, we are prepared to overlook the absurdity of making the civil medical needs of the country wait on the convenience of a *military* Medical Service. In no department is the fallacy of the contention of the Government that its measures are chiefly in the interests of India so easily shown up as in the arrangements made for the convenience of the members of the Indian Medical Service. Yet there is a good deal of special pleading for the Indian members of this Service, without much justification. The Indian Medical Service is an anomaly and at present a racial irritant. In the long run the Government has far more to lose by the perpetuation of the racial index. The Indian Medical Service has done gloriously in the past. But at the present time it is a clog to medical progress in this country and the Indian members more than the others unknowingly contribute to this undesirable state of affairs. By saying this we are letting ourselves in for the taunt of want of patriotism. But the interests of the Indian members of this service, even their disadvantages, should not blind us to the serious defects of the present medical organization of our country.

The Presidential address deals with a number of other subjects, but it is unnecessary to go into them in detail since the defects pointed out are well known and the remedies suggested are the ones generally thought of. Dr. Rama Rau has minutely criticized the defects in medical administration. But we confess to a sense of disappointment that he should recommend such conventional and time-worn reforms. There is an apparent desire to satisfy the various groups, while the times require a courageous lead for a rational organization of medical relief irrespective of various interests. And it is particularly unfortunate that public men should now subscribe to the maxim, "What cannot be cured must be endured."

## Decholin in biliary diseases



This diagram demonstrate the strong increase in bile secretion after intravenous injection of Decholin (1 amp. of 10 c.c. of 20% solution)  
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## JOURNAL OF SOUTH INDIAN MEDICINE

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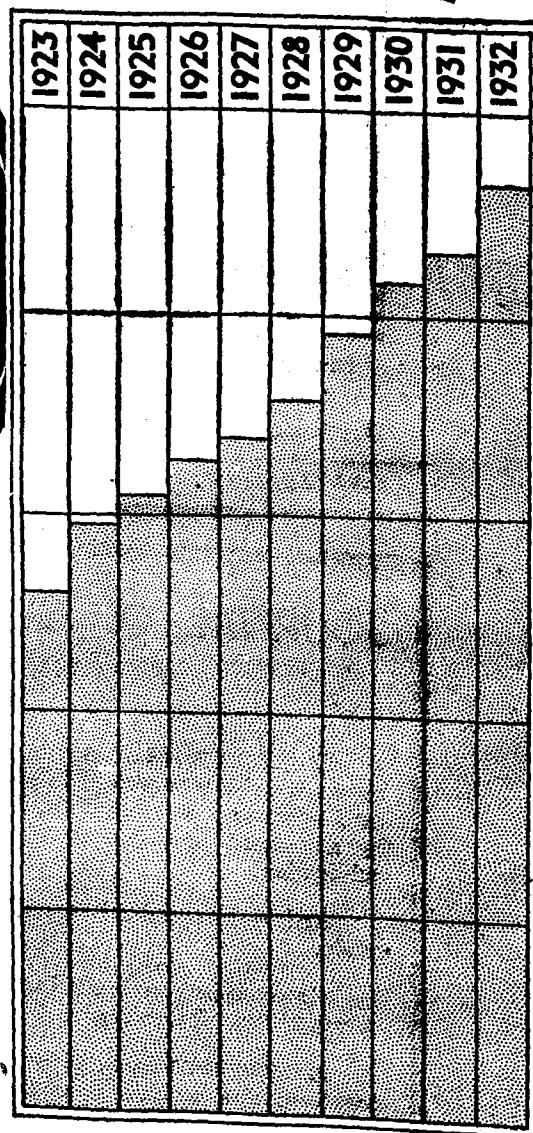
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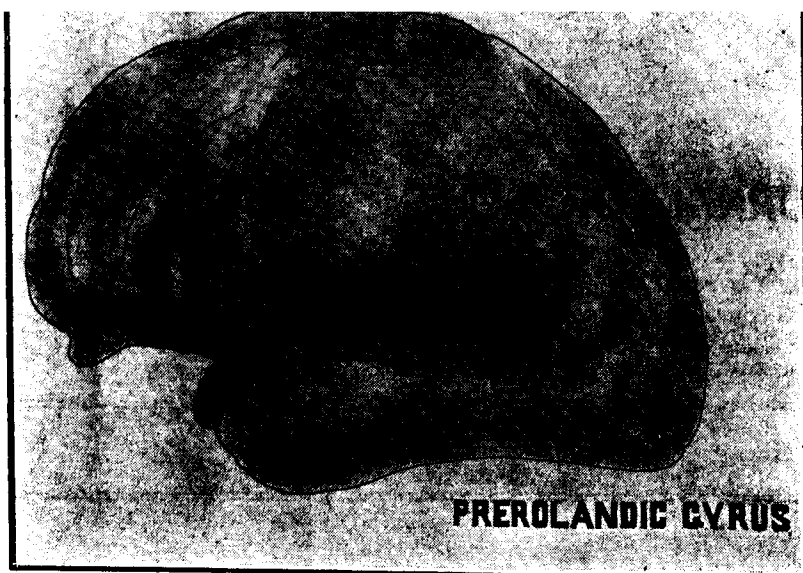
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# JOURNAL OF SOUTH INDIAN MEDICINE

(Incorporating the Bulletin of the South Indian Medical Union).

VOL. III

MARCH 1936

No. 3

## SOME ELEMENTS OF NEUROLOGY (3)

M. GERARD KELLY, CAPT., I.M.S.

*Physician, General Hospital, Madras.*

### UPPER MOTOR NEURONE LESIONS

(PYRAMIDAL TRACT LESIONS)

1. First decide whether the lesion is an upper-motor-neurone lesion or a lower-motor-neurone lesion.

2. Having decided that you are dealing with an upper-motor-neurone lesion, you must now locate the lesion. The lesion may lie in the :

- (1) Pre-Rolandic Gyrus ;
- (2) Internal Capsule ;
- (3) Mid-brain ;
- (4) Pons ;
- (5) Pons or Medulla Oblongata below Facial Nerve ;
- (6) Spinal Cord below Cervical Enlargement.

#### I. Pre-Rolandic Gyrus :

- (1) Cortical lesions are not extensive ;
- (2) The lesion is usually a monoplegia—arm or leg.

II. *Internal Capsule :*

(1) The lesion is extensive ;

(2) Face, arm and leg ;

or (3) Arm, leg and sensation :

Hemianaesthesia, if *sensory crossway* of Charcot is involved ;  
or hemianopia, from a lesion of the optic radiations far  
back in the internal capsule.

III. *Mid-brain : Weber's Syndrome :* (Crossed Paralysis).

(1) Paralysis of the eye on the side of the lesion due to involvement of the III nerve.

(2) Hemiplegia of face, arm, and leg on the opposite side.

IV. *Pons : Millard-Gubler Syndrome :* (Crossed Paralysis).

(1) Facial Paralysis of the lower-motor-neurone type on the side of the lesion ;

(2) Nuclear Paralysis of the VI nerve on the side of the lesion ;

(3) Hemiplegia of the arm and leg on the opposite side.

V. *Pons or Medulla Oblongata below the Facial Nerve :*

In unilateral lesions of the Pons or Medulla oblongata below  
the Facial Nerve—

(1) Face is unaffected ;

(2) There is a hemiplegia of arm and leg.

VI. *Spinal Cord below Cervical Enlargement :*

In an unilateral lesion of the spinal cord below the Cervical  
enlargement—

(1) The arm is not affected ;

(2) There is a monoplegia of the leg on the side of the lesion ;

(3) With anaesthesia of the opposite leg.

} Brown-Sequard  
Paralysis.

## I. HEMIPLEGIA

1. Hemiplegia is a unilateral lesion of the upper-motor-neurone in the Brain or Brain-Stem.

2. It indicates a complete or partial paralysis of one-half of the body.

1. *Immediately after the stroke there are signs of upper-motor-neurone lesion modified by spinal shock :*

(1) There is a flaccid paralysis of the opposite side—face, arm and leg :

(i) Arm more than leg ;

(ii) Leg more than face ;

(iii) On the paralysed side, the *deep reflexes* are absent for a day or two ;

(iv) The abdominal reflexes are also absent ;

(v) Babinski's sign is present from the first.

(2) Cranial Nerves involved are—

(i) The motor part of the V nerve ;

(ii) The lower half of the VII nerve (hence food collects round the teeth) ;

(iii) The XI nerve ;

and (iv) The XII nerve (with resultant protrusion of the tongue towards the paralysed side).

(3) The Cranial Nerves spared, according to *Broadbent's Law*, are—

(i) The III, IV and VI nerves (so there is no squint) ;

(ii) The upper half of the VII nerve (thus the patient can close both eyes) ;

(iii) The IX and X nerves.

(4) *Eye Signs :*

(i) The pupils are often unequal : they may be contracted or widely dilated, and the light reflex is often abolished.

(ii) There may be an initial active conjugate deviation away from the side of the lesion.

(5) Aphasia is a feature of right hemiplegia.

(6) Hemianæsthesia and } indicate involvement of the sensory crossway  
(7) Hemianopia } of Charcot.

(8) There is overflow incontinence of the bladder.

**Points serving to determine the side of the lesion :**

- (1) The paralytic conjugate deviation is towards the side of the lesion.
- (2) The corneal reflex is diminished or lost on the side of the lesion.
- (3) Painful stimulation elicits little or no response on the side of the lesion.
- (4) Flaccid paralysis, absent reflexes, and Babinski's sign are present on the side of the lesion.

**Criteria of a Severe Case :**

- (1) Deep coma.
- (2) Stertorous breathing going on to the Cheyne-Stokes' type.
- (3) Paralytic conjugate deviation away from the side of the lesion.
- (4) Little or no response to stimulation.
- (5) Complete bilateral flaccidity with complete loss of reflexes.
- (6) A bounding pulse from increased intracranial pressure.
- (7) A rapid rise of temperature within 24 hours.
- (8) Blood in the cerebro-spinal fluid indicative of haemorrhage.

**II. Some weeks later the signs of an upper-motor-neurone lesion appears :**

1. The Limbs—
  - (1) Exhibit signs of an upper-motor-neurone lesion with "clasp-knife" rigidity;
  - (2) They assume the "crusader" position;
 and (3) The gait is spastic with circumduction of the paralysed leg, while the toes scrape the floor.
2. There may be involuntary associated movements in the affected limbs, e.g., when the patient yawns he may raise his paralysed hand to his mouth.
3. The order of recovery is aphasia, and then the face, legs extensors, anus, flexors.
4. Mental changes occur especially in cortical lesions.

**III. Some years later : Residual Hemiplegia :**

- (1) The affected limbs exhibit weakness, spasticity and increased deep reflexes.
- (2) They are blue and cold.
- (3) Fibrosis occurs in the muscles with contractures and arthritic changes at the shoulder and elbow.
- (4) Involuntary movements—athetosis and chorea—are sequela of hemiplegia occurring in childhood.

**Diagnosis :****A. Anatomical Diagnosis.**

1. An extensive lesion—face, arm, and leg (with probably hemi-anaesthesia)—suggests a haemorrhage into the internal capsule.
2. A localized lesion—a monoplegia of an arm or leg—suggests a cortical thrombosis.

**B. Etiological Diagnosis.**

1. A sudden onset suggests a vascular lesion—embolism, haemorrhage, thrombosis.
2. The gradual onset in a young adult of transient hemiplegia suggests disseminated sclerosis.
3. The slow onset of an upper-motor-neurone lesion on one side suggests tumour or gumma.

**HAEMORRHAGE :**

1. Age—middle life—never in advanced age.
2. Occurs—under conditions of raised blood pressure—exertion, anger.
3. Prodromal thrombotic apoplexy.
4. Onset—rapid.
5. Coma—quick and deep, or ingravescent.
6. Hemiplegia—appears suddenly.
7. Aphasia—when aphasia accompanies hemiplegia, the cause of the hemiplegia is not cerebral haemorrhage. The reason of this is that aphasia is always due a cortical lesion, whereas cerebral haemorrhage causing hemiplegia takes place in the Basal Ganglia. (Horder).

## THROMBOSIS:

1. Age—under 40, syphilis; over 40, arteriosclerosis.
2. Occurs: under conditions of low blood pressure—during sleep after exhaustion, in the puerperium.
3. Prodromal symptoms—transient weakness, aphasia and giddiness—may be marked.
4. Onset—ingravescent, sometimes with convulsions.
5. Coma—disturbance of consciousness is relatively slight.
6. Hemiplegia—if hemiplegia comes and goes and then comes to stay, or if it takes some hours or days to become complete, it may be said with great confidence to be due to thrombosis. (Horder).
7. Aphasia occurs if the lesion is in the left hemisphere and involves or isolates the cortex.
8. "All slight apoplexies and nearly all those that survive the first 10 days after the ictus are due to thrombosis." (Collier and Adie).

## EMBOLISM:

1. Age—embolism occurs at any age, but the patient is commonly young.
2. Occurs in cardiac cases—mitral stenosis, aortitis, septic endocarditis, aneurysm.
3. Prodromal symptoms—absent.
4. Onset: always instantaneous.
5. Coma or convulsions: may accompany the onset.
6. Hemiplegia—is sudden, highest at the onset and may be associated with retinal embolism.

"When embolism in morbus cordis is cerebral in disposition, the most common result is hemiplegia and if the hemiplegia be a right hemiplegia, hemiplegia with aphasia.

*Right* hemiplegia because the embolus enters the left common carotid artery more often than the innominate artery, as the left common carotid arises from the top of the aortic arch;

*Hemiplegia* because the embolus comes to rest in the middle cerebral artery, the direct continuation of the internal carotid;

*With aphasia* because the lesion is virtually a cortical one, the obstruction to the middle cerebral producing ischaemia of Broca's convolution followed by softening." (Horder).

7. Aphasia—accompanies the hemiplegia of embolism when the obstructed vessel is on the left side because the lesion, though situated primarily in the middle cerebral artery, is in effect a cortical one, the brain substance being rendered ischaemic and therefore functionless. (Horder).

## Prognosis:

1. Immediate outlook—see the *Criteria of a Severe Case*.
2. Syphilitic cases have the best prognosis, haemorrhage the worst.
3. Future outlook—there is the possibility of another attack.

## Treatment:

1. Immediately loosen all clothing round the neck to allow free cerebral circulation.
2. Raise the head and shoulders, taking care not to bend the neck.
3. Turn the head and shoulders upon one side to prevent the tongue falling back.
4. Stimulants: alcohol, liquid foods and strychnine: to keep the cerebral circulation going.
5. Enemata at intervals.
6. Lumbar puncture until rate of flow of cerebrospinal fluid is normal, for diagnosis and relief of symptoms due to the high intracranial pressure.
7. Venesection, for cyanosis stimulates the circulation.
8. Exploration and decompression for cases of haemorrhage to relieve oedema.
9. Catheterize bladder.
10. Attend to bed-sores.
11. Passive movements at first.
12. Then massage and passive movements.
13. Electricity tends to increase spasticity and should not be used.
14. Get hemiplegics walking as soon as possible.

## 2. DISSEMINATED SCLEROSIS

### Etiology :

1. Age incidence : 15 to 45 (reproductive period).
2. Cause unknown—probably infective.
3. Syphilis plays no part in the etiology.
4. Disseminated sclerosis is the commonest organic nervous disease in Europe.

### Pathology :

1. An inflammatory patch may occur anywhere in the Central Nervous System, but there is a special selection on
  - i. The Pyramidal tracts,
  - ii. The Ocular apparatus,
  - and iii. The Cerebellum.
2. Demyelination is usually prominent as in post-vaccinal encephalitis.
3. "Cuffing" or "muffing" of the vessels, *i.e.*, a round-cell infiltration around the vessels, is seen as in :—
  - i. Acute anterior polimyelitis,
  - ii. Encephalitis lethargica,
  - iii. Post-vaccinal encephalitis,
  - and iv. Syphilis.
4. A great deal of the inflammation around the axis cylinder resolves—that is why the symptoms may rapidly clear up, but some sclerosis is always left behind.

### Rarer Lesions in Disseminated Sclerosis :

1. Posterior Columns : Ataxia.
2. Spino-Thalamic Tract—(1) Pain ;
  - (2) Paraesthesia ;
  - (3) Sensory loss.
3. Upper part of 3rd nerve Nucleus : Argyll-Robertson pupil.
4. Brain : Mental Changes.

### Symptoms :

1. The symptoms of disseminated sclerosis are very variable in the early stages.
2. In the early stages, symptoms may come on suddenly with mild pyrexia and disappear in the course of a few hours or days; such cases are often mis-diagnosed influenza.
3. Long intermissions may occur, especially in the early stages.
4. In the more advanced stages disseminated sclerosis is one of the most distinctive and most easily recognizable of nervous diseases.

*The most prominent features of a typical case of disseminated sclerosis are :*

1. Spastic paraplegia ;
2. Tremor in the arms ;
3. Eye signs ;
4. Scanning speech.

### Charcot's Triad :

1. Intention tremor ;
2. Nystagmus ;
3. Scanning speech.

### Other Disturbances :

1. Sensory symptoms ;
2. Sphincter disturbances ;
3. Mental symptoms.

### 1. Spastic Paraplegia :

Upper-motor-neurone lesion of the legs and often of the arms—  
"useless arm."

1. Heaviness, stiffness or weakness in one or both legs or arms.
2. Signs of an upper-motor-neurone lesion—
  - (1) Exaggerated deep reflexes ;
  - (2) Absent abdominal reflexes ;
  - (3) Babinski's sign.

Disseminated sclerosis is suggested by :

- (1) Remissions, and
- (2) The presence of *nystagmus, intention tremor and pallor of the optic disc.*

**II. Tremor in the Arms :**

1. The tremor is absent at rest ;
2. It appears on voluntary movement only : *intention tremor* ;
3. In its minimal form the tremor appears only at the end of a movement :
  - (1) On touching the tip of the nose ;
  - (2) At the end of a sentence, in writing ;
  - (3) On threading a needle.

**III. Eye Signs :**

1. Attacks of diplopia ;
2. Nystagmus ;
3. Unilateral retrobulbar neuritis, and pallor of the temporal half of the optic disc ;
4. Unilateral papilloedema.

**IV. Scanning or " Staccato " Speech :**

1. This is due to a lesion of the cerebellum or its afferent paths, which causes ataxia of the speech muscles.
2. Scanning speech is present when the cerebellum is affected, when nystagmus and intention tremor are also present.

**Other Disturbances :****I. Sensory Symptoms :**

1. Subjective—numbness and tingling in the extremities
2. Objective – areas of impaired sensation.

**II. Sphincter Disturbances :**

1. These are due to interference with the long path in the spinal cord by which volitional control and inhibition are exercised upon the act of micturition:
2. Therefore, lack of control in the form of hesitancy and precipitancy are common ;
3. Retention may occur.

**III. Mental Symptoms :**

These consist chiefly of loss of emotional control.

**Cerebro-Spinal Fluid :**

1. Lymphocytes : up to 50 per c. mm.
2. Luetic Curve : in 50 per cent of cases.

**Diagnosis :**

1. A history of transient limb weakness or visual or sphincter disturbance is very important.
2. Multiple lesions in a young person or asymmetry in the signs is suggestive.
3. Absent abdominal reflex is also suggestive.
4. Look for Charcot's *triad*.

**Differential Diagnosis :**

1. Hysteria.
2. Compression myelitis :
  - (a) Spinal tumour ;
  - (b) Spinal caries.
3. Friedreich's Ataxy in which the deep reflexes are lost early.
4. Meningo-vascular syphilis.

**Prognosis :**

1. Disseminated sclerosis is progressive with remissions.
2. The average outlook is 10 to 20 years.

**Treatment :**

1. Rest in acute stages.
2. Drugs : 1. Arsenic : Neo-Salvarsan or Silver-Salvarsan ;
  2. Potassium iodide ;
  3. Mercury ;
  4. Hyoscine ; Tinct. Stramonium, m. xxx to xc ; for tremor and rigidity.
  5. Belladonna for sphincter trouble.
3. Protein shock.
4. Malarial treatment.

may closely simulate this condition, but in most cases there are areas of softening due to caseation. The epididymis is usually adherent to the scrotal surface in tuberculosis.

### Treatment

*Acute Epididymitis.*—Absolute rest in bed and bland diet are imperative. Irrigation is contra-indicated in acute stages. Plenty of alkaline diuretics with Tinct Belladonna is given orally to prevent an extension of the infection to the other side. Local strapping with Pigmentum Belladonna or Ichthyol and Glycerine 25 per cent (very effective) is applied to abort the infection and to give relief to the swollen and painful epididymis, after completely shaving the groin and the scrotum in order to ensure closer contact with the infected and inflamed area. The painful scrotum is kept in a suspender with a T bandage which may be renewed every day to keep up the continuous action of the drug. The pain may be relieved by inserting a morphine,  $\frac{1}{4}$  grain, and atrophine,  $\frac{1}{75}$  grain, suppository per anum twice a day. Under local treatment, the swelling and pain subside.

Epididymitis may be aborted in the early stage by puncturing the globus minor with a needle of large bore and subsequent aspiration of either blood-stained fluid or pus from the epididymis. This considerably relieves pain and tension. The puncture must be performed carefully to make certain that only the epididymis is tapped, as otherwise the vas efferentia may be damaged. A more effective method is to follow the puncture and aspiration by an injection of 0.5 to 2 c. c. of electrargol into the body of the epididymis. This augments the pain in the epididymis for half an hour, but eventually there is considerable and rapid relief. In some cases it may be necessary to repeat the injection of electrargol 24 to 48 hours later. This treatment predisposes to subsequent occlusion of the epididymis and the vas efferentia. Open operation is the best, which is done under local anaesthesia. The scrotal parts are shaved and sterilised, and an incision 2 inches long is made on the postero-lateral aspect of the scrotum. The tunica vaginalis testes is opened over the entire length of the epididymis. Any adhesions between it and the epididymis are separated. The epididymis is now explored and any area of suppuration is carefully punctured with a tenotomy knife. In the absence of suppurating areas, the superficial surface of the inflamed epididymis is punctured in 5 or 6 places to relieve the tension. The tubules should be kept intact. The wound is washed out with sterile saline, and after inserting a rubber drainage tube in the lower end of the wound, the separate layers are stitched up with continuous catgut sutures. The drainage

tube is removed in 3 or 4 days and the wound is allowed to heal. This operation gives instant relief to the pain and the urethral treatment may be started next day after the operation. In a bilateral affection, open incision is the method of choice in that it gives the greatest chance of preventing subsequent sterility.

*Diathermy* is applied to a painful epididymis which persists in spite of local strappings. When the pain and swelling of the epididymis subsides, local treatment may be started by giving low anterior warm urethral lavage with 1 in 10,000 potassium permanganate solution. 5 c c, 7 c c, and 10 c. c. of a 10 per cent calcium chloride is injected intravenously every alternate day till the painful swelling subsides completely. Usually six injections of calcium chloride are sufficient to give complete relief. As the infected area is not easily accessible to antiseptic therapy, treatment through the blood stream by vaccines or proteins is of considerable value. Polyvalent detoxicated vaccine cuts short the inflammatory process and lessens the tendency to induration. Epididymitis rapidly improves with a course of *Goneal* injections.

*Chronic epididymitis.*—Local strapping with Pigmentum Belladonna is applied. Prostatic and vesicular massage is done twice a week till the urine passed after massage is clear and free from pus cells and gonococci. Examine through the urethroscope for foci of infection in the lower urinary tract and eradicate these foci, if any. Usually pyogenic organisms may keep up the condition. So autogenous vaccine in addition to polyvalent detoxicated gonococcal vaccine is very effective.

## GONORRHOEAL EPIDIDYMITIS.

M. RATHNAVELU, L.M.S.,

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Epididymitis is the commonest complication of gonorrhoea; it is probably the most easily preventable, but it occurs in about 25 per cent of all cases. It is said to render 23 to 40 per cent of the affected individuals permanently sterile. Epididymitis comes on during the second or third week of the disease, by direct spread of the gonococcus from the posterior urethra to the ejaculatory duct, and thence by the vas deferens to the epididymis. The ejaculatory duct is about 2 cm. long and the vas deferens is 45 cm. and the gonococcus has to travel all this distance against the current of fluid and the peristalsis of the vas. It is seldom due to a lymphatic spread from any part of the urethral tract.

### Etiology and Pathology

Predisposing causes are injury of the epididymis, trauma of the urethra from faulty instrumentation, by too early prostatic and vesicular massage, or by irrigating the bladder at too great a height, at more than 3 feet above the urethral level. Common predisposing factors are sexual excitement or strenuous exercise with a very full bladder, or some form of treatment that will increase the intra-urethral and intra-vesical pressure, so as to force the infective material from the seminal vesicles into the vas deferens and the epididymal tube. It has been observed that urine passes down the vas deferens in some individuals when the bladder is full and the fluids coming *via* the ejaculatory duct balloon the seminal vesicles before passing into the vas. It has been proved repeatedly by roentgenograms of substances injected into the seminal vesicles *via* the ejaculatory duct, that in some individuals, after the vesicle is entirely filled, some of the solution finds its way down into the vas deferens. This shows that if the pressure is great, fluids can be made to reach the epididymis. So it is established beyond all doubt that infection travels from the posterior urethra to the ejaculatory duct and thence by the vas deferens to the epididymis.

Usually, the inflammation starts at the globus minor and soon involves the entire organ. The testes is not involved generally. The gonococci may

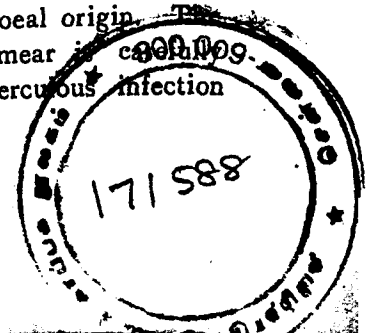
be excreted by the testes into the epididymis where they find suitable soil to multiply and set up inflammation. The cellular tissues around the testicle may, however, become involved in the inflammation so that the testicle may feel enlarged, hard and tender. The condition is usually unilateral, and only rarely bilateral. The swelling of the epididymis may almost envelop the posterior two-thirds of the body of the testis. Definite suppuration occurs with the formation of minute abscesses containing a few drops of pus, but extensive inflammation with a big abscess is rare. The entire organ is involved in a wide-spread inflammatory oedema and is swollen and tender. In more acute cases hydrocele may be present. The spermatic cord also may be affected and become thickened, tender and indurated. As this condition subsides, scar tissue is left which contracts on the spermatic vessels and the spermatic tubules. If this condition occurs on both sides, sterility results, but fortunately the inflammation is usually unilateral.

### Clinical Features

*Acute Epididymitis* occurs usually during the second or third week of the gonococcal infection. It is characterised by painful, tender swelling of the cord and epididymis, the globus minor being usually affected first. The epididymis can be felt as a tense tender swelling along the posterolateral border of the testicle. The infection is usually unilateral, but may be bilateral. Symptoms of right epididymitis may simulate those of an acute appendicitis. The skin over the affected part of the scrotum is red, inflamed and tender. There may be little urethral discharge and the urine in the two-glass test is turbid. In the majority of the cases, the acute condition subsides in 4 or 5 days and a sub-acute or chronic stage gradually supervenes. Suppuration is rare.

*Chronic Epididymitis* results from imperfect treatment with a marked tendency towards the formation of fibrous tissue in and around the vas deferens and in the epididymis. On palpation the epididymis feels indurated and enlarged, and in association with this chronic fibrous thickening, the structures of the spermatic cord are thickened and bound together by fibrous adhesions. There is usually a degree of vesiculitis and prostatitis. Fibrous thickening of the epididymis resulting from a previous gonococcal infection clinches the diagnosis. An irregular swelling of the epididymis which is tender on pressure and has in association with it a nodular thickening of the seminal vesicle on the same side is frequently of gonorrhoeal origin. The source of infection is established when the urethral smear is caudal, or examined microscopically or by culture. A subacute tuberculous infection

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## GLEANINGS FROM MEDICAL LITERATURE.

### 4. ADENOMATA OF THE PITUITARY, WITH SPECIAL REFERENCE TO PITUITARY BASOPHILISM OF CUSHING.

WILLIAM SUSMAN

*The British Journal of Surgery, January 1935, p. 539.*

Benign tumours of the anterior pituitary were considered of importance in the past because in some cases they caused acromegaly while in others the symptoms were due to mechanical causes. Recently Cushing has described a clinical syndrome characterised by rapidly acquired painful adiposity, lumbospinal pains, sexual dystrophy, hypertrichosis and a dusky facies which he termed 'pituitary basophilism' and considered to be due to hypersecretion arising from a basophilic adenoma or a hyperplastic basophilic area in the anterior pituitary.

The hypophysis was examined in the course of 260 routine necropsies, serial sections of the gland in the infundibular region being examined in the majority of instances.

Of the 260 glands, 22 contained 23 tumours and 20 of these were purely incidental in character, being symptomless. The history of these 20 cases were typical of the disease evident at the time of admission to hospital and at the time of death. The cases in which the tumour had given rise to symptoms were:—

- (1) A case of acromegaly in which the anterior pituitary contained an acidophilic adenoma.
- (2) A case in which an acidophilic adenoma had caused pressure symptoms.

The incidental tumours formed 8 per cent of the series and the basophilic tumour was the commoner type present. The age and sex distribution were roughly comparable with those of the general series. In what way then do these tumours differ from the actively secreting tumours of the acromegalic? The size of the tumour was no certain indication. However, in the acromegalic tumour the cells were *hypertrophied*; in contrast, the cells of the incidental tumours and the tumour which gave rise to pressure symptoms were *hyperplastic*, and were probably from a functional standpoint ineffectual.

If the basophilic adenomata had produced an effective and distinctive secretion of the nature of a hormone important to the sex mechanism of the individual a definite difference could be constantly expected as between children and infants, as sexually immature and practically sexless, on the one hand and adults on the other. This was however not the case in the series reported.

The histological data from this series give no support to the contention either of Zondek that the basophilic cells of the anterior pituitary secrete a sex hormone or of Cushing that hypersecretion of the basophilic cells caused by the presence in the anterior pituitary of a basophilic adenoma will give rise to the syndrome which he has termed 'pituitary basophilism'. Adenomata as a whole occur in 8 per cent of cases, the basophilic type in 3 per cent, and they are, therefore, too common to be of any special significance.

M. K.

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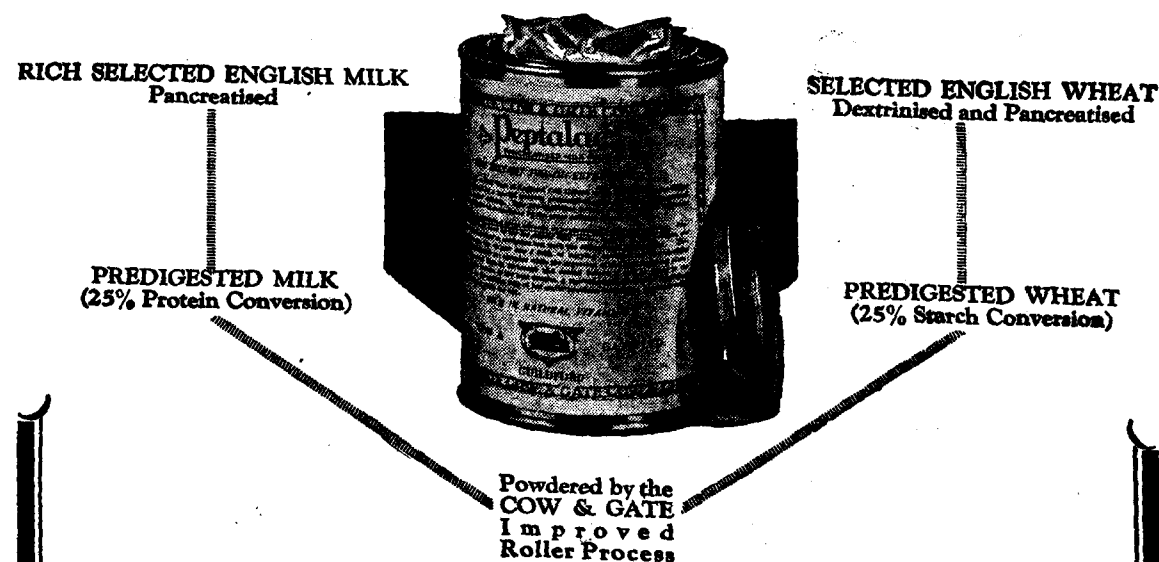
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## 5. LABORATORY INVESTIGATIONS IN UROLOGY

CUTHBERT DUKES

*The Post-graduate Medical Journal, November 1935, p. 390.*

Laboratory investigations of special interest in urology fall in three groups. These are:

### I. RENAL FUNCTION TESTS.

It is necessary in the interpretation of the results of these tests to remember: (a) that since slightly different functions are being measured by the different tests the results of the various tests do not exactly correspond to one another; and (b) that extra-renal factors, e. g., the state of the circulatory system, influence greatly the performance of the kidneys.

1. *Simple estimation of the concentrating power of the kidney.*—Loss of concentrating power is one of the first signs of renal failure and can be detected by the *Specific Gravity test*. The patient is not allowed any fluid, soup, milk, milk-pudding, or fruit, from 8 a. m. one day to 8 a. m. next day. Vegetables, meat, bread and butter are allowed. The patient empties his bladder at 8 p. m. and this sample and all urine passed prior to it are discarded. The urine voided between 8 p. m. and 8 a. m. is saved and shall have a specific gravity of about 1.030 and contain over 2 per cent of urea.

Another simple test is by forcing fluid, the patient being given as much fluid as possible in the form of barley water, Vichy water, etc., and the intake and output are measured. With the kidneys functioning well, the output of urine closely follows the intake of fluids and can be forced up to 100 oz. a day.

2. *Measurement of the rate of elimination of dyes.*—The *Indigo-carmin test* is used chiefly to contrast the function of one kidney from that of the other, usually when the patient is being examined by the cystoscope, the time of appearance of the dye at each ureteral orifice being noted.

10 c.c. of a 0.4 per cent solution are given intravenously, and dense blue clouds should be visible within 7 minutes. If one kidney is excreting within this period while the drug fails to appear at the other orifice within 15 minutes the latter is practically certain to be deficient.

*In the Phenol-sulphone-phthalein Test* 6 mgm. of the dye are administered intravenously in 1 to 2 c.c. of sterile water. The urine is collected by catheter and as soon as the pink color of the dye appears the catheter is plugged, and the contents of the bladder at the end of one hour and two hours after the first appearance of the drug in the urine are drawn off, and their phenol-sulphone-phthalein content estimated colorimetrically. With normal kidney function 60 per cent of the dye should have been eliminated in the first hour and another 20 to 30 per cent during the next.

3. *The Urea Concentration Test of Maclean.*—15 gm. of urea dissolved in half a glass of water is administered by mouth first thing in the morning before breakfast, no fluid having been allowed after 10 p. m. of the previous day. All the urine in the bladder after the first,

second and third hour following the administration is collected and the urea content in each sample estimated. If the percentage of urea is over 2 the renal function may be taken as normal, if between 1 and 2 as impaired, and if below 1 as badly damaged.

The advantage of the test is the fact that a substance normally excreted by the kidney is employed unlike as in the case of the dyes. The excretion of chlorides and creatinine may also be estimated with similar advantage, but this is not usually done as their estimation in the urine is not so easy.

4. *Chemical Analysis of the Blood*.—One of the chief functions of the kidney is the elimination of urea from the blood and any rise of the urea content of the blood over the normal 20 to 40 mgm. per 100 c.c. is an indication of defective renal excretion. In conditions of dehydration and in intestinal obstruction blood urea is raised, but in these it will be found that the urea content of the urine is also raised to as much as 4 per cent or more, whereas raised blood urea as a result of renal failure co-exists with a low percentage of urea in the urine.

5 to 10 c. c. of oxalated or citrated blood should be sent. Blood serum could be used, but plasma is better. Samples can be taken at any hour of the day and no appreciable deterioration occurs for several hours. The test should be done as near the day of operation as possible, and although it will not reveal minor defects of renal function it is one of the most useful tests, requiring little preliminary preparation and interfering little with the daily routine.

A blood urea of 50 mgm. demands serious consideration in deciding on surgical treatment, and a rise to 100 mgm. makes it advisable to delay all operations necessitating general anaesthesia.

The *Urea Clearance Test* is a more delicate one, revealing defects in renal function before urea, uric acid, or creatinine is increased in the circulation; but these minor defects are of more interest to the physician than to the surgeon.

These renal function tests should always be correlated with the clinical findings, and it is safest to carry out two or more of them and correlate the results. Experience has shown that a combination of the blood urea and urea concentration tests is a reliable guide to surgical treatment, although they may miss the minor defects of renal function.

## II. CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF URINE.

These consist of the determination of the specific gravity, reaction, the presence of albumen or sugar, pus, blood, casts and crystals, and the culture of any bacteria present.

## III. THE EXAMINATION OF OPERATION SPECIMEN.

This is often of great value and may decide important issues such as the presence or absence of cancer in an excised prostate, or evidence of malignancy in a villous papilloma. It is best to send specimens intact to the laboratory and not interfere with the natural shape and relationship of the organ, which may be disturbed by cutting or dissection before the tissue has been properly fixed.

M. K.

# TEN CARDINAL PRINCIPLES FOR MEDICAL MEN.

At the June meeting of the American Medical Association at Cleveland, the House of Delegates went on record in favour of the following set of principles to guide the medical profession in its efforts to meet the problems of medical service under the present menacing conditions:—

*First*:—All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

*Second*:—No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of the medical service must be borne by the profession.

*Third*:—Patients must have absolute freedom to choose a legally qualified doctor of Medicine who will serve them from among all those qualified to practise and who are willing to give service.

*Fourth*:—The method of giving the service must retain a permanent, confidential relation between the patient and a "family physician". This relation must be the fundamental and dominating feature of any system.

*Fifth*:—All medical phases of all institutions involved in the medical service should be under professional control, it being understood that hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the law of all nations recognise as competent to use them in the delivery of service. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

*Sixth*:—However, the cost of medical service may be distributed, the immediate cost should be borne by the patient, if able to pay, at the time the service is rendered.

*Seventh*:—Medical service must have no connection with any cash benefits.

*Eighth*:—Any form of medical service should include within its scope all qualified physicians of the locality covered by its operation who wish to give service under the conditions established.

*Ninth*:—Systems for the relief of low income classes should be limited strictly to those below the "comfort level" standard of incomes.

*Tenth*:—There should be no restrictions by non-medical groups on treatment or prescribing unless formulated and enforced by the organized medical profession.

—*Illinois Medical Journal*, 1935, Vol. LXVI, p. 201.

## FIRST INTERNATIONAL CONFERENCE ON FEVER THERAPY

The FIRST INTERNATIONAL CONFERENCE ON FEVER THERAPY is to be held at Columbia University, New York City, U. S. A., from September 29th to October 3rd, 1936.

The subjects to be discussed will include physiologic and pathologic changes as well as the treatment of gonorrhea, both in the male and in the female; gonorrheal and non-specific arthritis; syphilis in its various stages; neurologic conditions such as multiple sclerosis, chorea, paresis, tabes; skin diseases, etc.

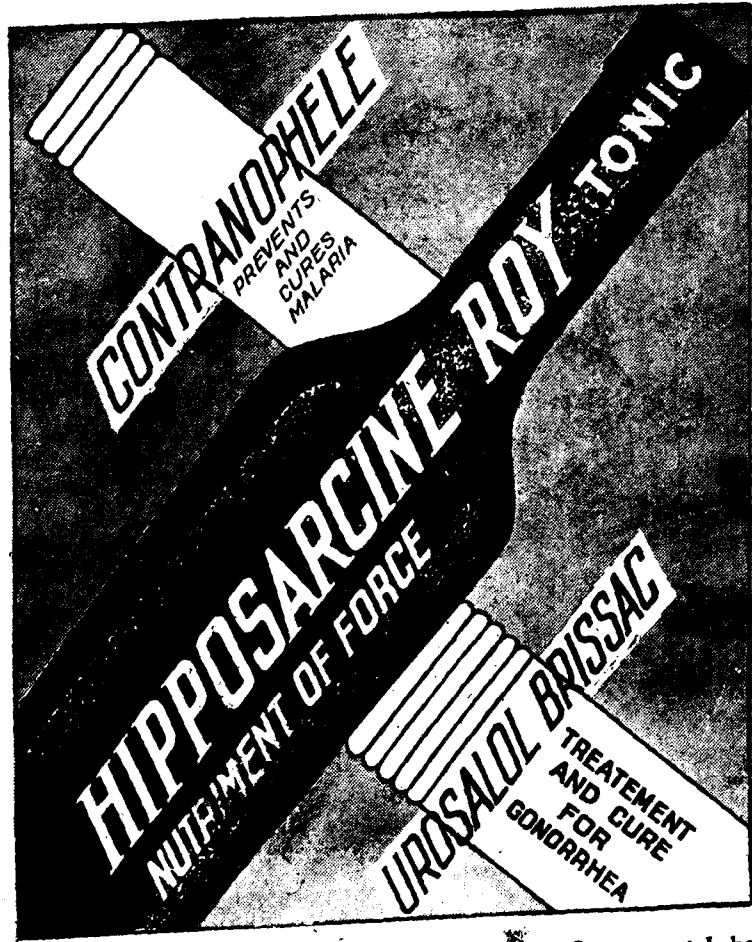
This meeting will be held under the chairmanship of Baron Henri de Rothschild of Paris, France. The French Committee, of which Professor d'Arsonval is Honorary President, is under the chairmanship of Professor Abrami. Other members of this committee include Professors Alajouanine, Binet, Claude, Janet, Lardennois Laubry, and Levaditi, and the general secretaries of the committee, Drs. Halphen and Auclair.

The American Committee consists of Drs. Desjardins, Bierman, Hartman, Hinsie Neymann, Simpson and Warren.

National European Committees are being formed under the direction of Professors Maranon of Spain, Frugoni of Italy, Volhardt of Germany, Wagner-Jauregg, and Eppinger of Austria, Michaux of Switzerland, Bessemans of Belgium, and Danielopolu of Roumania.

Abstracts of the papers to be read are to be published in the volume of the transactions in English, German and French.

Information regarding this Conference may be secured from the General Secretary, Dr. William Bierman, 471 Park Avenue, New York City, U. S. A.



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## INTERESTING CASES.

A Hindu married woman aged 35 came to me for the treatment of her Obesity. Her height was 5' 3" and her weight was 250 lbs. She was married at the age of 21 and her weight at that time was very much less, say about 120 lbs. She had never been pregnant and her menstruation had stopped about three years back. Iodobesin tablets were prescribed and the dosage adopted was this; for the first week she took two tablets daily, the second week 3 per day and the third 4 daily. Then the treatment was stopped for a week and recommenced in the same manner afterwards. As to diet she was allowed meat once a week and all green vegetables and raw fruits were permitted. Sugar, starches or fats were entirely forbidden. Simple physical exercises were recommended and scrupulous skin hygiene daily was encouraged. Too much of water drinking was not allowed. Under this treatment she lost about 30 lbs. in 5 weeks. The same routine was continued for about five months and her weight was brought down to 150 lbs. Her heart condition remained excellent. Within six months of this treatment her weight was reduced to 140 lbs. and she was menstruating regularly. Previously she had vague rheumatic pains in the joints, neuritis etc. and all sort of symptoms resulting from a cycle of amino-acid end products. All these entirely disappeared after six months of this treatment. After this reduction in weight she grew progressively stronger and more alert. She began to feel more active steadily, reduction in weight was gradual and sure without much loss of strength. The patient is at present following the treatment along the lines mentioned above and she weighs 130 lbs. This case clearly illustrates a defaulting endocrine system which was effectively brought to normal by means of Iodobesin.

*From the Diary of a Medical Practitioner.*

ADVT.

## ASSOCIATION NOTES

### THE EAST GODAVARI DISTRICT MEDICAL ASSOCIATION, COCANADA.

The Anniversary of the Association was celebrated with great eclat on 18th January 1936 in the Pydah Venkatachalapathy Town-hall premises. The members numbering 63 from all over the District met at Tea at 4-30 P.M. The business meeting commenced at 6 P.M. with Captain J. S. McMillan, I.M.S., President in the chair.

The first item on the Agenda was the reading of the annual report by the Secretaries. Then the question of modification of rules was taken up. Dr. V. C. Kamaraju moved that the rule No. 9, page 2 of the Rules book dealing with the management of the Association saying that the President of the Association shall *always* be the District Medical Officer be modified that the President shall *ordinarily* be the D. M. O. the word 'always' being deleted and substituted by 'ordinarily.' This was passed unanimously.

Another resolution which was moved and passed unanimously dealt away with the special seat on the managing committee reserved for women in view of the limited number of women members on the rolls.

The election of Office-bearers was then dealt with and the following were elected on the management.

|                                          |                                                                                                                                                                                 |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>President</i>                         | ... Captain J. S. McMillan, I.M.S.                                                                                                                                              |
| <i>Secretaries</i>                       | ... Dr. V. C. Kamaraju, L.M.S.<br>,, P. Adinarayana Swamy, L.M.P.                                                                                                               |
| <i>Members of the Managing Committee</i> | {<br>,, T. Kanakaraju, L.M.S.<br>,, Y. Ramasubramanyam, M.B.B.S.,<br>Cocanada.<br>,, K. Chelapathy Rao, L.M.P.,<br>Prattipadu.<br>,, B. S. S. Prasadaraao, L.M.P.,<br>Samalkot. |

The budget for the year 1936 was taken up and passed. It was resolved that in view of the inadequate circulation of Journals a Bulletin be issued by the Association containing amongst other things important extracts from all Journals once in three months and that a copy be issued free to

each member and that the scheme be worked for a year to see if funds permitted. Another resolution was passed that in view of the slackness of members in paying subscriptions and the large amount of arrears remaining, that hereafter a member should be notified when he is in arrears for three months that unless he pays his subscription within the next three months his name would be removed from the rolls after one month's final notice.

The number of Journals subscribed for by the Association was increased. It was resolved that the following be obtained for the Association.

- |                                                            |           |
|------------------------------------------------------------|-----------|
| 1. "The Indian Medical Gazette".                           | 2 Copies. |
| 2. "The Practitioner".                                     | 1 Copy.   |
| 3. "The British Medical Journal".                          | 1 "       |
| 4. "The Antiseptic".                                       | 1 "       |
| 5. "The Medical Annual".                                   | 1 "       |
| 6. "The Journal of South Indian Medicine".                 | 1 "       |
| 7. "The Journal of the Association of Licentiate, Madras". | 1 "       |

The question of affiliation to the Indian Medical Association was taken up. There was a heated discussion. There was a strong opposition from the Government servants who argued that in the absence of definite instructions from the Surgeon-General they should not be forced to join and that in case subsequently the Surgeon-General would not permit them to continue in the Association it would lead to some amount of dissolution in the Association. The other members were of opinion that in view of unnecessary fears it need not be postponed but it should be passed immediately being the ideal in itself and the Government servants may secede if necessary later on if so ordered by the Surgeon-General.

The President expressed, that although he himself would always be glad to see the Association merged into an all India organisation, in view of the opposition from the Government Medical Officers, it would be unwise to risk the dissolution of the existing Association, which was built up at great trouble, and that no vote be taken on the subject until every member had had an opportunity to study carefully the rules of the All-India Association previous to a special meeting when the question of affiliation would be discussed.

A resolution was passed congratulating Dr. T. Kanakaraju on his election to the Senate of the Andhra University. There was dinner at 8-45 P.M. and the guests dispersed at 9-30.

### THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION, PALAMCOTTAH.

The Seventh Annual gathering organised by the Tinnevelly District Medical Association commenced at 3-30 p.m. on Saturday the 18th January 1936, in the Centenary Hall, Palamcottah. Members numbering 90, including all the lady doctors were present. Twenty-seven members of the Travancore Medical Association, four members of the Trichinopoly District Medical Association, four members of the Tuticorin Medical Union and one member of the Madura Medical Association graced the function.

The business proper of the meeting commenced at 3-30 p.m.

The Secretary, Dr. N. Isaac, read the minutes of the last meeting held at Koilpatti, which were passed.

Then discussion regarding the monthly subscription for membership was taken up; and the majority agreed that a sum of Rupee one be fixed for each member without any distinction.

The Scheme of the federation of the District Medical Associations of the Tamil Districts was read out by Dr. Raghavan, the Secretary of the Trichinopoly District Medical Association.

The following modification of Rule No. 10 was unanimously passed.

Delete sub section 6 and in sub-section 7 substitute "two members" for "one other member" and number this as sub-section 6.

Then the election of Office-bearers was proceeded with.

Lieut.-Col. T. S. Shastry, I M S., was re-elected as President.

Dr. T. N. Govinda Ayyar, M.B. & C.M., was re-elected as Vice-President.

Dr. K. Rama Ayyar, M.B.B.S., was elected as Secretary and Treasurer

The following were elected as the members of the Managing Committee:—

1. Dr. Mrs. E. Bernard Carr (for lady members).
2. Dr. G. S. Narayana Ayyar, L.M.P., (for Rural Medical Practitioners).
3. Dr. T. S. Vaikuntaraman, L.M.P., } (for the General Body).
4. Dr. K. V. Muthiah Pillai, L.M. & S. }

Dr. K. R. Venkoba Rao, L.M. & S., was elected as the Auditor of the Association.

The guests were entertained to tea and light refreshments. After a group photo, the gathering were entertained to good music.

Lieut.-Col. T. S. Shastry, I.M.S., the President of the Association offered a hearty welcome to all the members and guests and the President of the Anniversary.

Then Lieut.-Col. Clive Newcomb, B.A., B.Ch., D.M. (Oxon), M.R.C.S., L.R.C.P. (London), F.I.C., F.C.S. (Oxford), I.M.S., Acting Surgeon-General with the Government of Madras, opened the proceedings as the President of Re-union.

The Annual Report of the Association was read by the Secretary and was adopted.

Lieut.-Col. T. S. Shastry, I.M.S., delivered an interesting lecture on the "Principles of Surgery of Breast Cancer" followed by a case note of excision of both breasts in a male, which was operated by him at the Government Headquarters Hospital, Palamcottah. A case of Elephantoid filarial leg treated by a new operation suggested by Dr. I. M. Orr, M.D., F.R.C.S., of Neyyur, and done by Lieut.-Col. T. S. Shastry, I.M.S., was read by Dr. G. S. Narayana Ayyar, L.M.P., of Moolaikaraipatti. This operation was a striking success.

Mr Kumar T. Narayana Menon, delivered an interesting lecture on "My own Experiences of Heliotherapy in Switzerland", in a charming address.

Mrs How-Martyn of the International Birth Control League delivered a brief and striking lecture on "Birth-Control."

Messages for the success of the function from Dr. C. E. Norman, L.R.C.P., & S.G., D.P.H., etc., President of the Trichinopoly District Medical Association and Dr. Simpson, M.B., Ch.B., Durbar Physician, Trivandrum, were read out.

The President Lieut.-Col. Clive Newcomb, I.M.S., brought the meeting to a close by his eloquent and appreciative address which is reproduced below.

With a vote of thanks proposed by Dr. T. N. Govinda Ayyar, M.B. & C.M., to the guests, and members of the three medical associations, and to

the musicians, the meeting terminated with a thanking speech from Dr. Mrs. Poonen Lukose, M.B.B.S., (London), L.M. (Rot.) of Trivandrum, on behalf of the guests.

Thereafter an excellent dinner wherein about 150 members of the Profession participated, was served—the European portion for the Surgeon-General and some of the Guests, and the Indian portion for all others. The grand banquet was brought to a happy close late at night after toasts proposed and replied to as below:—

*The King Emperor*:—Lieut.-Col. T. S. Shastry I.M.S.

*The Association*:—Dr. T. N. Govinda Ayyar, M.B. & C.M.

*Reply*:—Lieut.-Col. Clive Newcomb, I.M.S.

*The Guests and Visitors*:—Lieut.-Col. T. S. Shastry, I.M.S.

*Reply*:—Dr. I. M. Orr, M.D.

Thirty-seven members of the Profession (including 5 from outside) attended the Demonstration of the Birth-Control methods given by Mrs. How-Martyn at 9-30 a.m. on the 19th instant. This was very intimate, detailed, and instructive. The President Lieut.-Col. T. S. Shastry, brought it to a close with a hearty vote of thanks to the distinguished Lecturer from London at 11-30 a.m.

At 7-30 p.m. on the 19th instant, a Cinema show was given at the Eye Clinic of Dr. T. Mahadevan, M.B.B.S. (Madras), D.O.M.S. (London), by the Haverro Trading Co., by Mr. Sarathy and Dr. Soltner on Evipan Sodium anaesthesia, Amoebic Dysentery and Rivanol treatment and Blood-circulation. This show ended at 9 p.m. with a hearty vote of thanks to all the 3 gentlemen by Lieut.-Col. T. S. Shastry, I.M.S. This was attended by 15 members.

The concluding speech of Lieut.-Col. Clive Newcomb, B.A., B.Ch., D.M. (Oxon), M.R.C.S., L.R.C.P. (Lond.), F.I.C., F.C.S. (Oxford), I.M.S., Acting Surgeon-General with the Government of Madras, who kindly presided over the Seventh Anniversary of the Tinnevely District Medical Association, on 18th January 1936:—

Mr. President, Ladies and Gentlemen:—I thank you for the honour you have done in asking me to preside at this meeting of the Tinnevely District Medical Association and I am fortunate that such a well attended meeting should take place on a day when I could be in Palamcottah.

I was very interested in the report of the year's work and glad to notice that this District Medical Association is evidently a very popular and well run organisation which bids fair to reach the ideal of including every Registered Medical Practitioner in the district. The requests and opinions of an Association which can speak as a Corporate body for all classes of medical men in an area is bound to carry a great deal more weight than any society which tends to forward the views of only a section of the medical community. I am very gratified to note that at the time we were holding our College celebrations in Madras those old boys of the College in this district who could not manage to get to Madras were holding a similar—if smaller meeting here. Although I am only an adopted son of this *alma mater* I yield to none of the real sons in their affection for this College of ours. The activities of the Association are various and above all the scientific advantages arising from it I am sure the chief benefit which you all derive from the Association is the opportunities it gives you of meeting your fellow practitioners from all over the district, getting to know them and hence tending to see and appreciate their difficulties and explaining to them your own. I think we must all agree that there are too many castes and divisions in the medical profession in India which should be united into a more or less homogenous body as is largely the medical profession in England. This, I think, must be the ideal of nearly everyone, though we are not all of us equally agreed as to the methods by which this should be effected. This Association by arranging these meetings at monthly intervals and making them sufficiently attractive to bring together large numbers of the practitioners of the district is advancing towards this ideal by a method which no one could cavil at. We are very fortunate this afternoon to have Mrs. How-Martyn here and to hear her views on this very interesting and somewhat controversial matter of birth-control. We are also fortunate as doctors in having listened to the lecture of Mr. Narayana Menon on a special sort of medical treatment from the patient's point of view. It must be very rare indeed that a meeting of medical men should be addressed on a medical subject by a lay patient who is not himself a medical man and who gives us the impressions of a medical treatment from the other point of view. I know it is usual in such societies that the Secretary and Treasurer does most of the work and I am sure the Society owes a debt of gratitude to Dr. Isaac. Useful and such work as it could not have been so useful but for Colonel Shastri, your energetic President, whom I have to thank for this kind welcome and I am sure it is mostly due to him that this society is in such a flourishing state.

Under the auspices of the Tinnevely District Medical Association in connection with its Seventh Anniversary a Health and Medical Exhibition

was arranged at the Municipal Girls' School, Palamcottah, on Saturday the 18th January 1936, at 10 A.M. in the presence of Lieut.-Col. Clive Newcomb B.A., B.Ch., D.M. (Oxon), M.R.C.S., L.R.C.P. (Lond.), F.I.C., F.C.S. (Oxfrod), I.M.S., the Acting Surgeon-General with the Government of Madras.

Lieut.-Col. T. S. Shastri, I.M.S., the President, welcomed the guests and requested Dr. Mrs. Poonen Lukose, B.A., M.B.B.S., (London), L.M. (Rot), to open the Exhibition. Dr. Mrs. Poonen Lukose, expressed in a short speech that such exhibitions are very useful, instructive, and beneficial to the masses and declared the Exhibition open. Dr. S. Kolappa Pillai, L.M. & S. District Health Officer, explained the posters on the prevention and causation of Tuberculosis, Flies, and Cholera, for the benefit of about 200 boys and girls of the local schools, the posters on the subjects which were exhibited on the walls. The Exhibition was thrown open till late in the evening. The Exhibits consisted of posters relating to Cholera, Tuberculosis, Malaria, Small-pox, Fly-danger, etc. This was very much appreciated by the public.

At the Medical Exhibition held at 11 A.M. at the District Medical Officer's office, the following Firms dealing with articles of their manufacture relating to Medicine, Surgery, and Midwifery exhibited their goods.

1. Havero Trading Co., Ltd.
2. The Bengal Immunity Co. Ltd., Calcutta.
3. T. M. Thakore and Co., Calcutta.
4. Bole Brothers, Chemists and Druggists, Bombay.

The activities did not cease with to-day's function but extended till the 20th. The exhibition was kept open to the public on the 19th, and a cinema show was arranged for the 20th for the benefit of the common public.

The Tinnevely District Medical Association held its monthly meeting on Saturday the 29th February 1936 at Nanguneri. A Health Exhibition was arranged at the Board High School, Nanguneri, at 12 noon. The Exhibition was opened by Lieut.-Col. T. S. Shastri I.M.S. The Exhibition was thrown open to the public till late in the evening. The exhibits consisted of posters relating to Cholera, Tuberculosis, Malaria, Small-pox, Fly-danger, etc. About 300 School Teachers and School Mistresses of the Nanguneri Taluk attended the Health Exhibition which

Candidates in Surgery will be required to specialise in Surgery of one of the following description, viz :—Surgery

- (1) of the eye.
- (2) of the ear, nose and throat.
- (3) of the skull, brain and spinal cord.
- (4) Obstetrical and Gynaecological Surgery.
- (5) of the bones and joints including Orthopaedic Surgery.
- (6) of the urinary and generative system.

N. B.—For further particulars apply to the Secretary, State Medical Faculty of Bengal, Grosvenor House, Calcutta.



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was held in the same place as and along with the Educational Exhibition of the Teachers' Conference.

The monthly meeting of the Association began at 4-30 P. M. with tea at the Traveller's Bungalow, Nanguneri, under the Presidentship of Lieut.-Col. T. S. Shastry, I.M.S.

Resolutions regarding :—

(a) The late King George V.

(b) King Edward VIII.

(c) The late Colonel Bhola Nauth, C.I.E., I.M.S. (Retired).  
were passed unanimously.

The Secretary read the minutes of the last Annual Reunion which were passed.

The Draft Rules of the Tamil Nadu Medical Federation was also read by the Secretary for the information of the members.

The following clinical cases were demonstrated :—

| By whom                                                                                 | Cases.                                                                                                             |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| 1. Lieut. Col. T. S. Shastry, I.M.S.,<br>District Medical Officer, Tinnevely.           | A case of "Cancer Breast" which was successfully operated by him at the Govt. Head Quarters Hospital, Palamcottah. |
| 2. Do.                                                                                  | A case of fracture of the leg which was treated at the Govt. Head Quarters Hospital, Palamcottah.                  |
| 3. Dr. G. S. Narayana Iyer, L.M.P.,<br>Rural Medical Practitioner,<br>Moolaikaraipatti. | A case of Leprosy.                                                                                                 |

## NOTICE

### STATE MEDICAL FACULTY OF BENGAL

#### FELLOWSHIP EXAMINATION—TITLE *F.S.M.F.*

1. It is hereby notified for information of the Medical profession that the State Medical Faculty of Bengal has instituted the above Higher Examination equivalent to the Doctorate of the Universities by which the profession will be able to secure a coveted distinction.

2. The examination of the diplomas of Fellowship is held either in Medicine or in Surgery and may be held once a year.

3. The examination shall be written, oral, practical and clinical.

4. Every candidate must either be a member of the State Medical Faculty or possess qualification or qualifications in Medicine and Surgery recognised by the Governing Body as equivalent thereto. Such qualification or qualifications must have been obtained at least two years before the examination.

5. Candidates in Medicine will be required to specialise in one of the following groups of diseases, viz :—Diseases

- (1) of the nervous system and mental diseases.
- (2) of the skin.
- (3) of the heart and circulatory system.
- (4) of the respiratory system.
- (5) of the digestive system including diseases of the liver.
- (6) of the urinary system.
- (7) Tropical diseases.

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