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Indian Medical

Journal

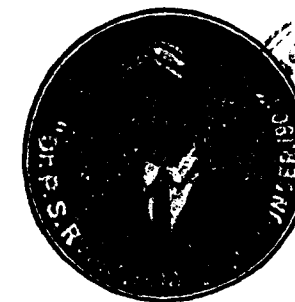


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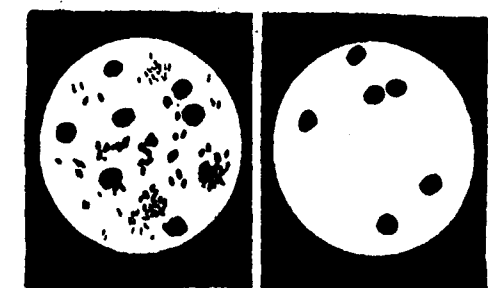
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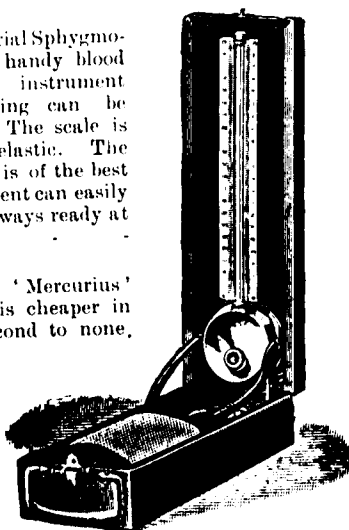
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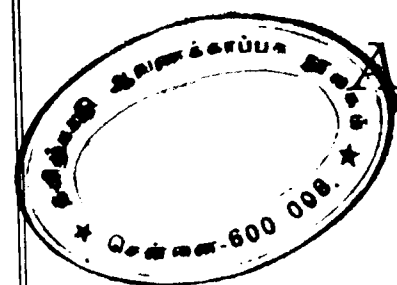
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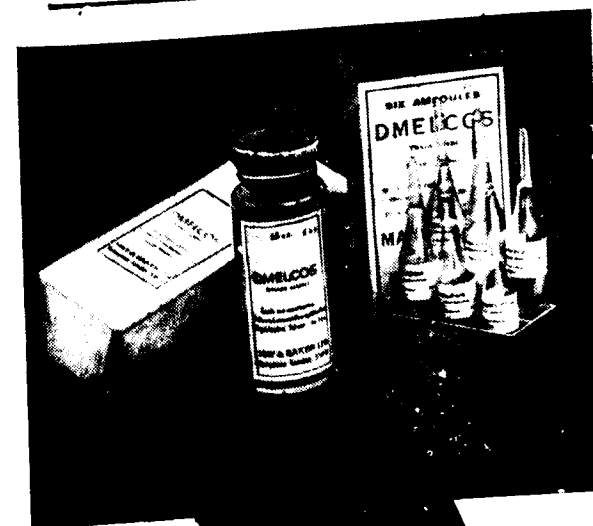
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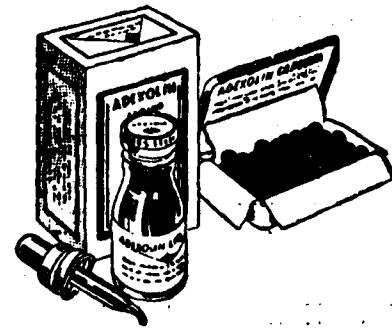
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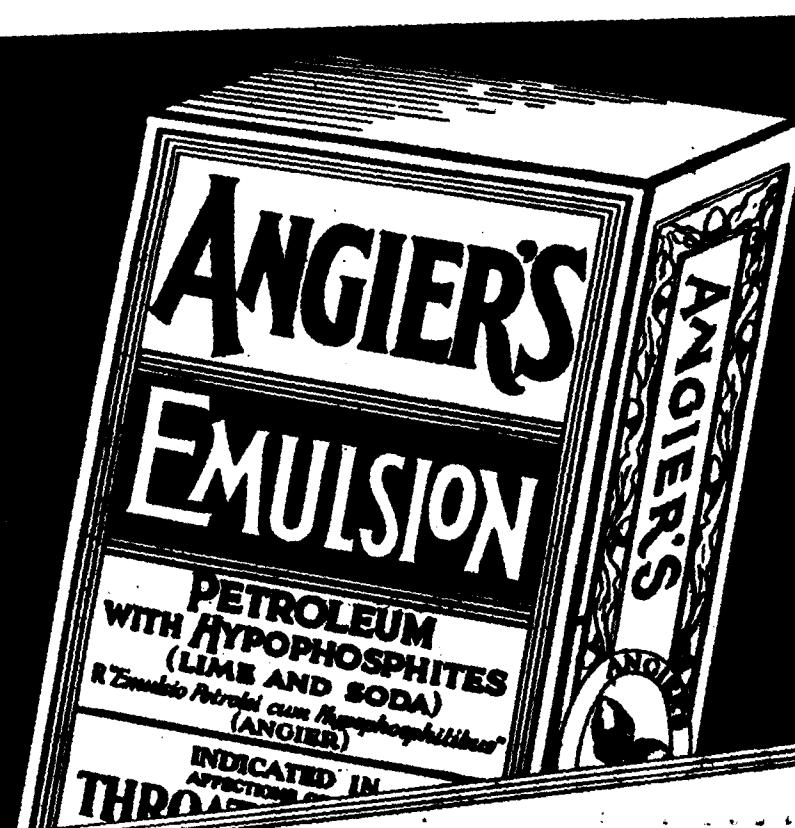
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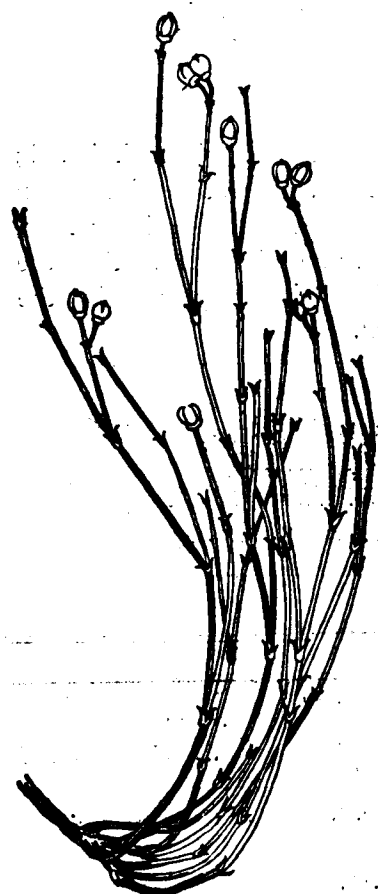
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Vol. XXX No. 2

Madras

February, 1936

ADDRESSES AND ARTICLES

Black-Water Fever*

● Dr. C. S. Venkatasubramaniam, L.M.P.,
M.B., B.S., Madras

This fever is common in our presidency in the Agency Tracts of Ganjam, Vizag and Godavari and certain parts of Salem District. Though mostly seen in those areas, cases are also seen, though rarely, in Madras in those who have returned from such endemic areas. My object in reading this paper is to present a rough and ready method of treatment which has given good results.

Our worthy President, Capt. Krishnasamy, had an unique opportunity to treat a large number of cases while he was Principal Medical Officer, Agency Operations, Base Hospital, Narasipatam during the years 1922, '23 and '24 and this will be an opportunity for us to be benefited by his observations.

I claim no originality in the preparation of this paper and I duly acknowledge my courtesy to the various authors and periodicals referred to in its course; perhaps, it can be taken as a critical review of black-water fever which, though clinically recognised as such for the last 50 years, is still incompletely understood in many of its aspects specially its ætiology, the factors which bring about hæmolysis and specific treatment. The field is thick with theories none of which has yet claimed scientific acceptance, though there are enthusiastic adherents to each and every one so far propounded.

Definition.

An acute disease characterized by pyrexia, generally ushered in by severe rigor, bilious vomiting, icterus, hæmoglobinuria and frequently diminution or suppression of urine (Manson).

*A paper read at the clinical meeting of the Madras Branch of the A.I.M.L.A., on 21-10-35 and received for publication on 26-10-35.

Geographical Distribution.

Black-Water Fever is generally acquired in localities where malaria is prevalent such as in low marshy grounds and in high altitudes full of rank vegetations. The disease manifests itself in the area wherein it is contracted and also sometimes after the patient has left the endemic area. It is commonly believed that the disease manifests itself outside the endemic area in persons who go to the sea-cost towns immediately after serving in these Agency Tracts. In Europeans, it sometimes occurs during their sea voyage to England. An I.C.S. Officer under whom I served in the Ganjam Agency and who proceeded on leave died of black-water fever on the 4th day after landing in England.

Predisposing causes are—

- (1) debility from frequent attacks of malaria.
- (2) bad food combined with hard work.

Length of residence.

The disease is rare within first six months but comes on in the 1st or 2nd year of residence. New comers to the Agency Tracts suffer from it. But the Agency Tract people do not themselves suffer, perhaps due to immunity conferred on them by infection during their childhood.

Ætiology. There are four theories:—

- (1) the malaria theory
- (2) the quinine theory
- (3) the specific theory
- (4) the anaphylaxis theory.

(1) The Malaria Theory.

Those in favour of this theory point out that:—

- (1) black-water fever is prevalent only in malarial regions.
- (2) it occurs in people who have previously suffered from malaria,
- (3) malarial parasites are present in the blood of such cases,
- (4) large mononuclear leucocytosis is seen in such cases.

But those against argue that :—

- (1) black-water fever is not generally seen in all malarial regions,
- (2) though it occurs in people who have suffered from malaria previously yet it is no manifestation of malaria as it occurs in some who have never suffered from malaria at all,
- (3) malarial parasites may be co-existent with black-water fever,
- (4) mononuclear leucocytosis occurs in many protozoal diseases also.

(2) The Quinine Theory.

The quinine theory of black-water fever arose in Greece on the observation that black-water fever manifested itself in most of the cases after the administration of quinine. This is also the view held by most of the medical men and other officers who have served in the Agency. The I.C.S. officer whom I mentioned before left a note to his successor saying that he believed in large doses of quinine! Was his contracting B.W.F. due to his taking large doses of quinine?

Those against argue that :—

- (1) B. W. F. has occurred in people who have never taken quinine,
- (2) the disease was known even before the introduction of cinchona bark into Europe,
- (3) quinine even in toxic doses never produced B. W. F. in healthy people or in patients who had malaria.

[In the Base Hospital, there was a mishap and Malabar special police men, most of whom had suffered from malaria, got a concentrated solution of quinine mixture containing almost 40 gr. of quinine per oz. Most of them suffered from toxic symptoms such as giddiness, etc., but none of them developed B. W. Fever.]

- (4) the people who suffer from it may be idiosyncratic to quinine.
- (5) quinine is being used by some in the treatment of B. W. F.

With regard to the role of quinine, Dr. Ross reports the history of 162 cases as follows :—

- (1) No quinine taken for at least one week prior to the onset of black-water . . . 11 cases.

- (2) Patients regularly taking prophylactic quinine; one dose only of quinine taken prior to the onset of black-water . . . 31 cases.

- (3) Hæmoglobinuria developed after several doses of quinine had been taken . . . 100 cases.

"The obvious irregularity in the relationship of quinine to the attack is so great, a number of cases present a perplexing problem if we are to regard quinine as an important factor in the actual genesis of black-water fever and suggests that the mechanism whereby the effect is produced is of a complex nature." (I.M.G. Editorial.)

(3) The specific or bacterial theory.

B. W. Fever resembles the red-water fever of cattle which is caused by piroplasmosis. But as yet no piroplasma has been seen in the blood of B. W. Fever cases and no other parasite has till now been found.

(4) The Theory of Anaphylaxis.

"Christophers and Bentley have found that in the blood in B. W. F. there is a substance of the nature of an immune body (autolysin) which in association with complement leads to the solution of red corpuscles, this lysin being apparently developed as the result of blood destruction in malaria". (Muir's Pathology)

(5) MacGil Christ has recently advanced the view that black-water fever is brought about by an acidosis in one with a damaged liver plus malaria and the administration of quinine. He thinks that one can safely give quinine when along with it alkalies are being given and that quinine base is protective against hæmolysis.

Recent work on the subject is in favour of the view that black-water fever is a manifestation of malignant malaria but the condition leading to the excessive hæmolysis is not yet understood. (Muir's Pathology.)

Pathology and Morbid Anatomy.

In B. W. F. there occurs a lysis of red corpuscles in the circulating blood. The liver cannot convert the great amount of hæmoglobin released into bile pigment so that hæmoglobinæmia and hæmoglobinuria result.

The kidneys are congested with purple coloured pyramids. Tubules are blocked by casts. This causes suppression of urine and anuria.

Spleen.—malpighian bodies are prominent and sharply outlined.

Liver.—shows focal necrosis.

Epithelium of liver, spleen, and kidneys gives prussian blue reaction.

Heart.—myocardium shows fatty change.

Urine.—the hæmoglobin in the urine becomes altered and imparts to it a dark brown or almost black colour; hence the name. The urinary sediment is made up of granular debris with hæmotoidin crystals. Red cell is rare. It is not hæmaturia. Urobilin and albumin are present in large quantities.

Symptoms.

The patient gives previous history of many attacks of malaria. According to Manson, a pre-black-water fever stage exists which is characterised by a large and tender liver and spleen, high coloured urine containing urobilin and usually a cloud of albumin. Blood shows either scanty rings or developing trophozoites.

The attack sets in with a rigor and the patient, thinking it as only an attack of malaria, takes or is given quinine. He feels pain over the loins and burning sensation while passing urine and is alarmed on seeing the urine dark red or black.

On admission the patient has an anxious look with an icteroid tinge of the conjunctivæ. Tongue is coated. Spleen and liver are enlarged and tender. He is constipated and there is thirst. There is nausea, epigastric discomfort and bilious vomiting. There is headache and pain over the loins. The temperature may persist or come down to normal. Pulse is rapid, 110—120 per minute, feeble and of low tension. In mild cases, the colour of the urine returns to normal after a few days. In severe cases the colour does not change, the pulse becomes thready with pallor and cold extremities. There is hiccough and the patient dies of coma due to suppression of urine. The urine on examination is acid in reaction and contains albumin. It contains lot of sediments which show hyaline and hæmoglobin tube casts on microscopical examination. R. B. C's are absent.

Low and Fairly describe the following clinical types :—

- (1) Mild to moderate cases.
- (2) Fulminating cases which die in 1 to 3 days from toxæmia or anoxæmia.
- (3) The anuric type: catheterisation often shows small quantities of highly albuminous, perhaps bile stained urine followed by complete suppression. Anuria may set in early and is associated with a normal or sub-normal temperature. Hepatogenous jaundice not infrequently develops.

Life may be prolonged many days and death may occur without signs of uræmia.

- (4) Intermittent or continuous type: here the hæmoglobinuria which may be continuous or remittent lasts up to 8 days. Temperature continues to be raised and post-hæmoglobinuric fever commonly follows.

- (5) Hæmolytic type is characterised by hæmorrhage from the gastro-intestinal mucosa and elsewhere.

- (6) Hyperpyrexial type: Daniels described this condition as preceding death, the temperature rising to 110°F or even higher.

Prognosis.

Mortality varies. All mild cases recover if treated early. Manson puts down the mortality at 25%. Unfavourable features include rapidly increasing jaundice, grave anæmia severe hiccough, anuria and hyperpyrexia, while bile in the urine or a persistent increase in the blood urea and bilirubin are grave prognostic signs.

Sequelæ.—marked anæmia and nephritis (sometimes).

Complications.

- (1) Anuria.
- (2) Biliary colic.
- (3) Pigment calculi.
- (4) Cholecystitis.
- (5) Pneumonia.

Diagnosis.

It has to be diagnosed from.—

- (1) Paroxysmal hæmoglobinuria
- (2) Bilious remittent malaria
- (3) Yellow Fever
- (4) Chlorate of potash or carbolic acid poisoning
- (5) Snake-bite

"The diagnosis from paroxysmal hæmoglobinuria is difficult as both diseases have the same symptoms. But Wassermann's reaction may show that most of these are syphilitic. It would appear that in such persons there is always present a hæmolysin which is set free in the plasma on exposure to cold, and which is absorbed by the red corpuscles. On return to warmth this hæmolysin is activated by a complement present in normal plasma and leads to destruction of red corpuscles." (Donath and Handsteiner).

Tablet I. Differential Diagnosis

	Black-Water Fever	Yellow Fever	Bilious remittent
1. Onset	... Sudden but asthenic	Sudden but sthenic for two or three days	Slow onset
2. Urine	... Hæmoglobinuria-pink foam-albuminuria from 1st day	No blood in urine before 3rd or 4th day and then hæmaturia-albumin from 2nd day	Bile in urine-yellow froth on shaking urine-albuminuria slight and not common
3. Jaundice	... Early and intense-comes on in a few hours	Does not appear before the third day and gradually intensifies	Jaundice develops slowly, about 2nd day
4. Spleen	... Somewhat enlarged and tender	No enlargement of the spleen	Splenic enlargement is marked-may have <i>ague cake</i>
5. Pulse	... Rapid from start and becoming more so as disease progresses	Stationary pulse with rising temperature or failing pulse with stationary temperature (<i>Faget's sign.</i>)	Pulse not so rapid as in black-water fever
6. Vomit	... Early marked bilious vomiting	Mucus like, followed by black vomit about 4th day	Bilious vomiting and gastric distress lesser than in black-water fever
7. Evidence of malaria...	Usually present as parasites, mononuclear increase	Negative	Some evidence at some time almost always obtainable

Prophylaxis same as for malaria. Avoid mosquito bite. Use always mosquito curtains. Indiscriminate use of quinine in the endemic area for every kind of fever without microscopical examination of blood for malarial parasites is to be condemned. Use of Atebrin instead of quinine in chronic malarial patients with jaundice and enlargement of liver and spleen may prevent an attack of black-water.

Treatment. There is no specific drug for this disease. The treatment is purely symptomatic. Some consider Ext. cassia berriana liquidum as specific while European workers lay great stress on the intravenous injection of soda-bicarb.

The following line of treatment is suggested. The aims of treatment are (1) prevention of acidosis, (2) raising of the blood pressure and replacement of the lost fluid, (3) and

dissolving of the coagulants which may block the kidney tubules.

- (1) stop quinine.
- (2) keep the patient in absolute rest in bed. The patient should not be allowed to get up from bed and bed pan should always be used.
- (3) stop all food by mouth. Give him plenty of Imperial drink or soda water and in later stages barley water.
- (4) give him a saline purgative to start with (1 oz. of mag. sulphas dissolved in 2 oz. of water). Repeat the purgative every 24 hours.
- (5) Ext. cassia berriana liquidum is given in drachm doses in one ounce of water every hour till the urine shows change in colour to light red. The drug acts as a diaphoretic, diuretic, and is a heart stimulant.

- (6) Manson recommends, as an important measure, injection of sodium bicarbonate intravenously (150 grains to a pint of distilled water) as soon as the diagnosis is made. Sodium bicarbonate solution should not be boiled as by boiling sodium carbonate is formed which is toxic.

(7) *For the vomiting:*

- (a) put a mustard plaster over the pit of the stomach. Remove it after 20 minutes, wipe it dry and dust zinc oxide and starch.
 - (b) pieces of ice can be given to lessen the nausea and the vomiting.
 - (c) saline enemata by *Murphy's drip* method is good to replace fluid lost by excessive vomiting.
- (8) If there is diminution in the quantity of urine passed or if there is suppression do dry or wet cupping over the loins or give hot fomentations. Give intravenous injection of sodi bicarb.
- (9) If the fever persists give him *Atebrin* in tablet form, 0.1 gramme, twice daily. If he cannot stomach it, give by injection. This is preferable to quinine as it is less likely to provoke hæmolysis.
- (10) If the heart sounds are weak, cardiac stimulants are indicated. Caffein is valuable both as diuretic and heart stimulant. Caffein sodi benzoas 0.25 gram can be injected subcutaneously, or caffeine citras 2 grains twice a day. Antipyretics should not be used because of their depressing action on the heart. Glucose can be given by intravenous injection, 300 cc. (crystallised glucose 47 gram., water 1000 cc.).

- (11) During convalescence give iron tonics with liver extract.

- (12) The following is also recommended:—
"Lapenta", a hæmostatic serum, to stimulate blood coagulation. The serum is given intravenously in doses of 2 to 4 cc. diluted with 20 cc. of normal salt solution. These injections are given twice daily until the urine clears up.

- (13) Harsey advocates:—

Bichloride of Mercury 1/30 grain
Soda Bicarb 10 grains
Aqua ad 1 oz.

every 2 hours.

- (14) Wallace recommends salines as hot as can be borne, administered high in the colon. The results are due to the action of heat over the splanchnic area.

- (15) Others recommend blood transfusion.

Dr. Ross writes as follows about sodium bicarbonate treatment:

"The alkaline treatment of black-water has received most extensive publicity and there is some danger of its being regarded as a panacea. One fact however deserves emphasis. Despite the number of authors who have published their findings the total number of cases covered by their reports is small. There is thus ample justification for the critical to wonder whether the ordinary probability of recovery is sufficiently allowed for. If alkaline therapy is used, the oral or rectal route is to be preferred to intravenous. Intravenous injection of large quantities of sodi bicarb are undoubtedly dangerous and may cause even tetany and death. In Southern Rhodesia, the intravenous injection of bicarbonate in cases in which symptoms of suppression were present was attended with disappointing results. Used in the strength of 150 grains to a pint, the injection in amounts of 1 and 2 pints was ineffective in preventing the development of suppression of urine in 3 cases of anuric type. Further in B.W.F., although there has been a loss of corpuscular volume of the blood there has been no corresponding loss in the plasma and there do not appear to be special indications for intravenous saline injections. Blood transfusion would appear to be much better."

The following are some of the cases treated in the Base Hospital, Narasipatam. Capt. Krishnasamy, the principal Medical Officer was in charge of these cases.

Case No. 1

Patient G. was admitted into the hospital on 30-5-1923 for treatment of malaria. The patient was a new comer to the Agency and had been serving in the infected area, 8 months previous to admission. He gave history of many previous attacks of malaria. The present complaint began on the 28th and 29th April with fever and so he was sent from the hills to the Base Hospital, Narasipatam for treatment.

On admission.—the patient's temperature was normal. His conjunctivæ was tinged yellow. Spleen was not enlarged. Liver was enlarged, one finger's breadth below the costal margin.

The urine.—was yellow coloured; 1020 sp. gr; acid in reaction and contained neither albumin nor sugar. Bile pigment present. The patient was treated with ammonium chloride mixture and saline

purgatives. Locally, for the enlargement of liver, ung. hydrargyri iodidi rubri was rubbed. The patient was not given quinine.

8-6-28. He had an attack of fever in the evening and temperature rose to 102°F. He was given a saline purgative.

4-6-28. Morning temperature came to normal. Quinine mixture (10 grs. to 1 oz.) 8 times a day was given by mouth. In the evening the temperature rose to 104°F.

5-6-28. The morning temperature came to 99°F but showed a rise in the evening. The patient was given a saline purge and 10 grains of acid quinine hydrochlor was injected intramuscularly.

6-6-28. The temperature came to normal. Did not rise in the evening. At about 8-80 P. M. he complained of pain during micturition and urine was dark brown in colour and the sediment on microscopic examination showed hyaline and hæmoglobin tube casts. The yellow tinge of the conjunctivæ deepened and the spleen was enlarged to two finger's breadth below the costal margin.

Treatment

5-25 p.m. Mist. Mag. Sulphas 2 oz. given.

5-80 p.m. 1 oz of Ext. Cassia Bearriana liq in an ounce of water repeated every one hour. Mustard plaster was put over the epigastrium. All food by mouth was stopped. Imperial drink given whenever he felt thirsty. He passed small quantity of urine at 10-80 p.m., 12-85 a.m., 1-40 a.m., and 4-80 a.m. The urine passed at 4-80 a.m. showed some change in colour to cherry red.

7-6-28. Same mixture continued every one hour. Mag. Sulphas was repeated in the morning. No food except Imperial drink was given. At 4 p.m. he passed urine and motion. The urine was little paler than the urine passed at 4-80 a.m. Dry and wet cupping applied over the loins. Total quantity of urine passed that day was 22 ozs; of this 16 ozs were passed after cupping.

8-6-28. Mag. Sulphas was repeated. Total quantity of urine passed 25 ozs. The urine showed change in colour from red to orange. No food except Imperial drink was given by mouth.

9-6-28. Mag. Sulphas in the morning. Urine returned to normal colour at 9 a.m. Ext. Cassia Bearriana was stopped. Thin congee water given in the evening. Total quantity of urine passed 28 ozs.

The points of interest in this case are:—

- (1) the patient showed signs of pre-black water fever stage *viz.*, jaundice, enlargement of the liver and history of previous malarial attacks.
- (2) the patient developed B. W. F. the next day after the intramuscular injection of quinine.
- (3) signs of suppression of urine on the 7th day relieved by dry and wet cupping as shown by the result of 16 ozs of urine being passed out of the total quantity of 22 ozs passed that day.

(4) the urine showed change in colour after 24 hours' treatment with ext. cassia and completely cleared up on the 4th day.

(5) no note is made about the result of blood examination for malarial parasites.

Case No. 2

Name: Joseph, Christian, male, aged 25—employed as a constable in the Malabar special police.

The patient was admitted to the Base Hospital on 5-7-28 at 10-40 p.m. He had been serving in the endemic area during the previous 8 months and has had several attacks of malaria.

4-7-28. The present complaint began on the evening of 4th July with fever. That night he felt burning sensation while passing urine and as it was night time he did not notice the colour of the urine.

5-7-28. The fever did not subside in the morning. He was given a saline purgative. At 10 a.m. he passed urine and had motion. As the urine was dark red in colour and his general condition not good he was immediately sent in an ambulance car to the Base Hospital. The patient arrived at the hospital at 10-40 p.m. He had an anxious look, conjunctivæ was tinged yellow. Temperature 101°F, Pulse 86 and respiration 28 per minute. Liver and spleen not enlarged.

Usual treatment adopted. He was put to bed. No food except Imperial drink was given by mouth. Ext. Cassia Bearriana liq. 1 drachm in one oz. of water given every hour.

At 1 a.m. he passed 12 ozs. of urine. He felt pain during micturition. The urine was dark red in colour, acid in reaction and albumin was present. The sediment on microscopic examination showed hyaline and hæmoglobin tube casts. R.B.Cs were absent.

6-7-28. Mist. Mag. Sulphas 2 ozs. given. Ext. Cassia Bearriana was continued every hour. At 12-40 p.m. he passed 14 ozs. of urine. The colour has changed from dark brown to cherry red. No food except Imperial drink was given. The morning temperature was 100.5°F. but came to normal in the evening. 7-80 p.m. 12 ozs. of urine passed. The colour was gradually changing. Total quantity of urine passed that day was 26 ozs.

7-7-28. Temperature normal. General condition of the patient better. The yellow tinge of the conjunctivæ was gradually disappearing. At 7 a.m. Mist. Mag. Sulphas 2 ozs. given. From 10 a.m. to 6 p.m. Ext. Cassia liq. given every 2 hours. Total quantity of urine passed that day was 29 ozs. The colour of the urine changed to orange. Albumin was still present.

8-7-28. Both morning and evening temperature normal. General condition of the patient showed improvement. At 7 a.m. Mist. Mag. Sulphas 2 ozs. Imperial drink and barley water was given. At 4 p.m. the colour of the urine returned to normal. Ext. Cassia liq. was stopped. Total quantity of urine passed that day 34 ozs.

From 8-7-28, the patient's diet was gradually increased first to milk and then to rice and mutton.

The icteroid tinge of the conjunctivæ completely disappeared on the 12th day of the disease.

The points of interest in this case are.—

- (1) there was no tendency to suppression of urine.
- (2) the temperature came to normal on the 3 day without quinine.
- (3) the urine showed change in colour the next day and completely cleared up on the 5th day after the administration of Ext. Cassia Liquidum.

Case 3

Balaji Singh—Hindu—aged 25 years—Reserve Police Constable: was admitted to the Base Hospital for treatment on 15-11-22

He gave previous history of attacks of fever with shivering on alternate days. He had been touring in the endemic area for more than a year as an orderly to the Agency D.S.P.

The present complaint began on 18-11-22 with fever attended by shivering. On the night of 15-11-22 *i.e.*, previous to admission, he took at night arrack with one quinine pill. The same night he got alarmed at seeing his urine dark red in colour.

15-11-22. On admission the patient was semi-conscious and restless. He was jaundiced, tongue was coated and tenderness felt over the splenic region. He was constipated. The urine was black, loaded with albumin. Sp. Gr. 1045, no sugar. Temperature 104.4°F., Pulse 126., Respiration 26 per minute. Blood examined but no parasites found. Total quantity of urine passed that day was 30 ozs.

Treatment.

- (1) the patient was put to bed.
- (2) Ext. Cassia Bearriana liq. was given in drachm doses every hour.
- (3) 8 grains of acid quinine hydrochlor was injected intramuscularly.
- (4) no food was given by mouth except plenty of Imperial water to drink.

16-11-22. Temperature, morning 103.5°. Evening 102.5°F. Very slight improvement in the general condition of the patient. The urine still black and loaded with albumin. Total quantity of urine passed 24 ozs: Mist. Mag. Sulphas 2 ozs. was given at 7 a.m., Ext. Cassia liq. in drachm doses repeated every 1 hour. Dry and wet cupping done over the loins. 2 pints of saline given in the axilla. No diet except plenty of Imperial drink and barley water. 5 grains of acid quinine hydrochlor was injected intramuscularly.

17-11-22 Morning temperature 101.8°. Evening temperature 100°F. General condition of the patient slightly better. Urine colour changed to deep red. Albumin still present. Total quantity of urine passed: 20 ozs. At 7 a.m. Mist. Mag. Sulphas 2 ozs was given. Ext. Cassia liq. repeated every 1 hour. No food except barley water and Imperial drink: saline 4 pints given by rectum.

18-11-22. Morning temperature 99°F, evening 102.2°F. General condition improving. Colour of the urine changed to orange. Albumin still present. Quantity of urine increased to 30 ozs. Ext. Cassia repeated every hour. Saline, 4 pints, was given by rectum. 6 grains of acid quinine hydrochlor was injected intramuscularly. No food except soda and barley water.

19-11-22. Morning and evening temperature 100°F. Patient looked much better. Total quantity of urine increased to 35 ozs. Colour changed to yellow. Albumin still present. Ext. Cassia Liq. repeated every hour. 7 grains of acid quinine hydrochlor injected intramuscularly. Diet. Barley and soda water. Saline 2 pints was given by rectum.

20-11-22. Morning temperature normal. Evening temperature 100°F. Patient's general condition considerably improved. Urine: quantity increased to 42 ozs, colour changed to slight rum colour. Ext. Cassia Liq. repeated every 2 hours. 10 grains of acid quinine hydrochlor injected intramuscularly. Diet—Horlicks and barley water.

21-11-22. Morning temperature 99°F. Evening temperature 100°F. Patient's general condition better. Urine: quantity increased to 45 ozs, colour changed to normal. Albumin disappeared. Ext. Cassia Bearriana Liq. was stopped. 10 grains of acid quinine hydrochlor was given intramuscularly. Diet, barley water and Horlicks.

The points of interest in this case are:—

- (1) Persistence of fever with symptoms of hæmoglobinuria.
- (2) Treatment with Ext. Cassia Bearriana Liq. and intramuscular injections of quinine.
- (3) Blood examination showed no malarial parasite.
- (4) Urine showed change in colour on the 3rd day and completely cleared up on the 7th day.

The question arises: was the injection of quinine rational? The following is from Stitt's *Tropical Diseases* about the administration of quinine:

"There is little unanimity of opinion as to the advisability of giving quinine during an attack of black-water fever. Quinine base is devoid of hæmolytic influence so that the fear of increasing hæmolysis would not have to be considered in its administration. At any rate any red cells containing parasites will surely be destroyed in the general hæmolysis and with them their contained parasites, so that it does not seem reasonable to give quinine during the first day or two of the attack. If given, this should not be by mouth for fear of increasing the nausea and vomiting."

Manson Bahr cites Castellani as laying down the following sensible rules as to the use of quinine in hæmoglobinuric fever.

- (a) If hæmoglobinuria occurs during a malarial paroxysm and parasites are found in the blood, quinine should be given.

- (b) If parasites are not found in the blood, quinine should not be given.
- (c) If quinine has been already given before and haemoglobinuria has appeared, and no parasites are found, its use should be suspended but if parasites persist it should be continued.

Case 4

Mr. Srinivasa Rao, Sub-Inspector of Police, Hindu, aged 35 admitted into the Base Hospital on 11-12-23 at 8 p.m.

The patient had been serving in the endemic area for 5 years. He has had several attacks of malaria and quinine treatment. This was his first attack.

Four days before the date of admission he got fever with shivering. He vomited all food and even sips of water were not retained. Mustard plaster over the epigastrium gave some relief. Next day he took a saline purgative and two five grains acid quinine hydrochlor pills, three times a day. The temperature used to come down in the mornings but rose in the evenings.

On 11-12-23 he felt very weak and as he was daily getting fever, he sought admission into the hospital.

11-12-23. On admission the patient was weak, jaundiced, constipated and temperature 100.4°F. The spleen was enlarged, two finger's breadth below the costal margin. Liver not palpable. As he had severe headache, 5 grains of aspirin in $\frac{1}{2}$ oz. of brandy was given. Blood examination showed no parasite.

15-12-23. Morning and evening temperature normal. Mist. Mag. Sulphas 2 ozs. given at 7 a.m. quinine mixture (10 grs to 1 oz.) 3 times a day.

16-12-23. Morning temperature normal. 10 grains of acid quinine hydrochlor was injected intramuscularly. Evening temperature rose up to 103°F. 1 ounce of quinine mixture (10 grs. to 1 oz.) was given by mouth. The urine was high coloured. Diet: milk and soda.

17-12-23.—Temperature normal in the morning but 99.8°F in the evening. Quinine mixture three times a day continued. Diet: milk, bread and soda. Patient's general health better.

18-12-23.—Morning temperature normal, evening 99.4°F. Quinine mixture three times a day was continued.

19-12-23.—The patient was given as usual 1 oz. of quinine mixture in the morning. His temperature normal but the icteroid tinge of the conjunctiva deepened. He complained of pain during micturition. The urine on examination was sherry red in colour and contained albumin and lot of sediment. Quinine mixture and milk diet were stopped. Ext. Cassia Bearriana Liq., 1 dr. in 1 oz. of water was given every 1 hour. Diet: plenty of Imperial drink. The patient had no rise of temperature in the evening.

20-12-23.—2nd day of attack of black-water.

Temperature normal both morning and evening. Ext. Cassia continued every 1 hour. Diet: Im-

perial drink. Urine was less than the previous day. No change in colour. Still loaded with albumin. General condition of the patient better. Dry and wet cupping was done over the loins to lessen the congestion of the kidneys.

21-12-23.—3rd day of black water.

Morning and evening temperature normal. Urine: showed change in colour from red to orange but still contained albumin. Quantity of urine was increased. Same treatment was continued.

22-12-23.—4th day of black-water.

Urine: colour came to normal. Quantity increased. Yellow tinge of the conjunctivae was fading. General condition much improved.

The points of interest in this case are:—

- (1) the quinine has probably precipitated the attack.
- (2) the patient showed definite symptoms of pre-black-water fever stage—bilious vomiting, jaundice, fever, enlargement of the spleen and absence of malarial parasite in the blood.
- (3) the urine showed change of colour on the 3rd day and completely cleared up on the 4th day.
- (4) he showed signs of suppression of urine on the 2nd day which improved after dry and wet cupping.

I will conclude my paper with the following taken from the *Transactions of Royal Society of Tropical Medicine* by Manson-Bahr:

Clinical records are given of 20 cases of black-water fever observed in London during the past 13 years. All the patients had been in Africa. In five of these cases, the cataclysm took place while the patient was undergoing routine treatment for subtertian malaria and in none of these cases was the onset foreseen. Of the total of 20 cases, 8 died—a mortality rate of 40 per cent indicating that the average attack of B.W.F. in England is as severe, if not more so than the disease as it occurs in tropical Africa. Death was due to blood destruction caused by the great hæmolysis in six cases, one was due to septicæmia from a parotid abscess, after the patient had made a recovery from threatened suppression of urine and one was due to lobar pneumonia which also supervened after suppression of urine. In every case in this series the actual production of hæmolysis appeared to be connected with the administration of quinine. Although in these cases the attack commonly developed without any previous warning, the author thinks that in some cases there is possibly a recognizable pre-black-water state—a cachectic condition due to prolonged infection with a subtertian parasite. In this state the patient has a large and tender liver and spleen and passes highly coloured urine containing urobilin

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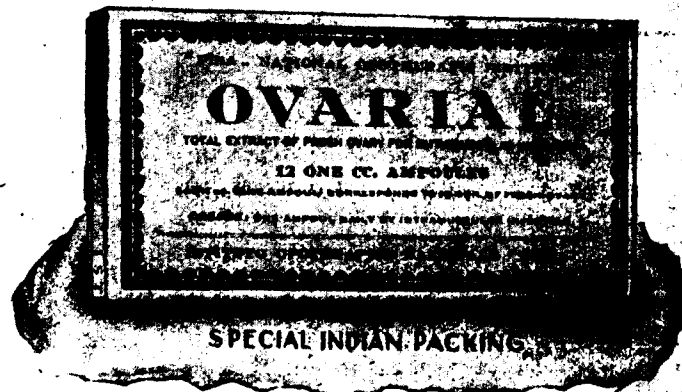
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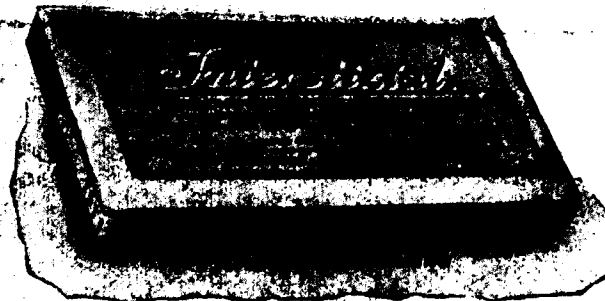
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II

Treatment of Gonorrhœa in the Female*

• By Dr. U. S. Rao, Bombay.

Gonorrhœa in the female is a serious illness owing to the mildness of the symptoms in the early stage, its exasperating tenacity and the formidable complications which frequently supervene especially in those untreated or badly treated cases. It will not be an exaggeration if I were to say that most of the women suffering from gonorrhœa may not be aware, nay, may not have even the faintest suspicion of their having contracted the disease.

When a woman is attacked by gonorrhœa, it is invariably the urethra that is first infected. The symptoms being mild, are not considered in any seriousness by an average patient; the acute stage may thus pass off without the patient ever becoming aware of the seriousness of the disease she is harbouring. Sooner or later, the bladder gets infected and symptoms of cystitis supervene. It is at this stage that the patient usually seeks the advice of her doctor.

Although it is a matter of daily practice, the treatment of gonorrhœa is unusually difficult. It is an admitted fact that during the first few hours of infection, the gonococci are on the surface of the mucous membrane and that they

penetrate the interstices of the epithelial cells into the substance of the mucous membrane within 24 to 48 hours. When the gonococci invade the urethral mucosa, the urethral capillaries dilate and diapedesis of a large number of leucocytes occur. These leucocytes engulf and destroy the organisms; the resulting supuration is thus a salutary measure for obtaining a cure. Hence the treatment of the condition consists mainly in aiding nature in her efforts.

Rest in bed, strict general and local hygienic measures and plenty of bland fluids to drink are all of primary importance in any successful scheme of treatment of the condition.

Spicy and indigestible dishes, alcohol in any form and strong tea or coffee should all be strictly forbidden. The patient should be encouraged to drink plenty of fluids in the form of water, barley-water, weak tea, fruit syrups, water of tender coconuts, etc.

Scrupulous cleanliness of the genitals is essential to avoid ulceration of the vulvar surface and to protect other members of the household, especially young female children. The patient should have a hot alkaline and antiseptic hip bath at least twice daily. Sanitary towels used should be burnt and the hands thoroughly washed and disinfected after any manipulation to avoid the possibility of infecting other parts especially eyes and nose.

Abstinence from sexual excitement is essential as otherwise local congestion of the parts may cause extension to other parts.

Medicinal treatment comprises of.—

1. A daily saline aperient to keep the bowels clear.
2. Alkaline diuretics to mechanically wash out the urethral canal.
3. Urinary sedatives such as Tinct. Hyoscyamus, Infusum Buchu, Punarol and the like to relieve pain and discomfort.
4. Sedatives like bromides, belladonna, etc., to overcome urethral and uterine spasm and liqr. sedans especially during menses.

For very early cases, abortive treatment may be tried. Of course to get such cases is very

*A Paper read at the Clinical Meeting of the Bombay Branch of the All-India Medical Licentiates' Association on 4-8-1935 and received for publication on 19-9-35. Ed. I.M.J.

(Continued from previous page)

and usually a cloud of albumin and in whose blood either scanty rings or developing trophozoites may be found and whose R.B.C. show stippling. In this state *Atebrin* is recommended as a drug less likely to provoke hæmolysis. Four out of the twenty cases has had previous attacks of B.W.F. and in every case there was a definite history of previous malaria. The subtertian malaria parasite was demonstrated in 11 cases. Among the complications that may arise are mentioned cholelithiasis, bilirubinæmia, biliary colic, pigmented gall stones amœbic dysentery with hepatitis. With regard to treatment, the injection of sodium bicarbonate intravenously (150 grains to a pint of distilled water) directly the diagnosis is made is recommended as an important measure. Glucose is an advantage and blood transfusion is followed with good results."

rare. When the infection is confined to the urethra alone, the abortive treatment is worth trying.

The patient should be asked to empty the bladder. She is then put in lithotomy position, the external genitals are swabbed with 1/4000 biniodide of mercury lotion, cleansing at the same time all the areas and crypts around the urethral canal. The urethra is then irrigated with about 4 pints of warm 1 in 8000 to 1 in 10,000 pot. permanganate lotion by means of a Janet nozzle, keeping the can 1 to 2 ft. above the patient's hips and withdrawing the nozzle now and then so as to cleanse first the urethral canal. The nozzle is then held firm until the bladder is filled and then withdrawn. The patient is then asked to void the contents. The process is repeated 3 to 4 times. This over, six to eight c.c. of pure colloidal silver is instilled into the urethra and over the trigone of the bladder with a sterile all-glass syringe, and the patient allowed to lie in supine position for at least half an hour. She is directed not to urinate for at least six hours after the instillation. The treatment is repeated twice daily for three days. Specimen of the urethral discharge is taken daily before starting the treatment and also during the treatment at a time when the patient has not urinated for four to five hours. If at the end of three days' treatment, there is any evidence of gonococci in the urethral smear, abortive measures must be considered to have failed and ordinary routine treatment should be instituted.

During the course of abortive treatment, Skene's duct if infected (which is evidenced by the redness at the opening) should be instilled with colloidal silver solution through a blunt pointed hypodermic needle. So also the para-urethral ducts must be treated.

Scheme of routine treatment of acute gonorrhoea in the female:—

1. Hot alkaline antiseptic hip-baths at a temperature of 105—110°F. This reduces the congestion of the deeper parts. A tablespoon of soda-bicarb or two teaspoons of sanitas, or a teaspoon of lysol or a tablet containing 8.75 gr. of perchloride or biniodide of mercury to each gallon of water may be added to the bath.

2. Irrigations.—The urethra and bladder are washed out by pot. permanganas. lotion 1/4000 to 1/6000 at a temperature of 104° to 112°F. Any of the following may also be used instead of pot. permanganas.

Acriflavin	... 1/1000 to 1/5000
Mercurochrome	... 1/1000 to 1/4000
Albargin	... 1/3000 to 1/6000

Picric acid	... 1/4 to 1 per cent.
Neoprotosil or Lunosol	... 5 to 10 per cent.

In the subacute and resolving stages of acute gonorrhoea where mixed infection is suspected, chloramine T or dichloramine 1/4000 to 1/5000 and oxycyanide of mercury 1/5000 to 1/8000 may be substituted for the above. Subsequent to the disappearance of gonococci from the smears and in the resolving stages, stimulating lotions such as zinc preparations may be used.

In those cases where urethral irrigations are not possible, medicated urethral bougies may be advised. The patient may be taught to insert the bougies herself into the urethra after micturition, daily morning and evening. For this purpose 1/4 to 1/2 per cent mercurochrome or acriflavin in combination with 3 per cent chloretone is useful.

Douching.—Is not advisable as a routine treatment for fear of spread of infection to other parts. It may however be used to cleanse the vagina. Pot. permanganas. 1/4000 to 1/8000, mercurochrome 1/4000, dichloramine 1/4000 to 1/5000, oxycyanide of mercury 1/5000 to 1/8000 or eusol 1/2 per cent are all efficacious as douching solutions.

3 to 4 ounces of the following combination in 3 to 4 pints of warm sterile water at a temperature of 100 to 102°F is also said to be very efficacious for the purpose of douching.

R/	
Acid carbolic	... 3 i
Alum sulph. exicc.	... 3 iv
Oleum mentha pip.	... m xxx
Acid boric saturated Solution	... 8 oz.

The other chief indications for douching are: (1) A vaginitis complicating cervicitis, (2) the subacute and resolving stages of salpingitis and oöphoritis, (3) a pelvic cellulitis and (4) a pelviperitonitis.

Moist swabbing.—Is more advantageous than douching. The rugæ and crypts of the vulvar and vaginal surfaces are stretched when the parts are swabbed out. Same antiseptics as are recommended for urethral wash are good enough for this purpose. The vagina may also loosely be packed with sterile gauze wrung out of the antiseptic of choice. This favours the inflamed area to be kept apart and to charge them with antiseptics constantly. This is very useful in vulvitis, vaginitis and cervicitis.

Dusting Powders.—To keep the parts as dry as possible after swabbing, and also to prevent the bacterial growth, it is a good plan to dust the parts with a powder consisting of zinc

oxide gr. x, bismuth sub-gallate gr. xx, mag. carb. levis gr. xx, pulvis amyli oz. i. The powder should be applied to the vulva and vagina by means of a suitable insufflator.

Topical Applications.—These are of great use in cases of Bartholinitis, skenitis, para-urethritis, etc.—colloidal silver, lunosol 10%, picric acid 1% or electrargol injected through a blunt pointed hypodermic needle into the infected duct give gratifying results. In cases of cervicitis, stronger strengths will have to be used. 1% picric acid in spirit, 1/1000 acriflavin or mercurochrome, 50 per cent formaldehyde in glycerine or dichloramine 1/10 per cent in glycerine may be applied on dressed probes or applicators.

During menstruation, all active treatment should be suspended and the patient should be given absolute rest in bed. Just before and during menstruation liqr. sedans in 1/2 to 1 drachm doses should be given in addition to the other routine medicinal treatment.

Generally within 3 to 6 weeks, acute urethritis subsides with appropriate treatment.

Injections.—In addition to the general medical and local treatment, injection therapy may have to be instituted especially in subacute and chronic forms as well as in cases with complications. Non-specific protein therapy suffices in many cases. An intradermal or intramuscular injection of well sterilised fresh skimmed milk is the ideal preparation for this therapy. The injections may be repeated at intervals of 4 or 5 days according to reaction. Aolan, lactumin, lactosol, etc., are also said to be equally efficacious.

Trimine injected every third day acts equally well. So also trisol, solargol and palladium. Sometimes in cases not responding favourably to these measures, vaccine therapy is found to be of great value. In such cases, polyvalent detoxicated gonococcal vaccine in graduated doses should be administered.

Treatment of common complications of gonorrhoea in the female: Cystitis.—In addition to the routine treatment with alkalis, sedatives and hot hip bath, bougies prepared of morphine 1,4 gr. and atropine 1/100 gr. may be employed to relieve the symptoms of irritation of the trigone of the bladder. Cystoscopy or urethroscopy and direct application of 1% silver nitrate to the vesical trigone sometimes gives gratifying results. Pain at the end of micturition and dribbling of urine after the act of micturition is relieved by dilating the urethra with solid bougies and painting the surface of the inflamed trigone and vesical sphincter with 1 per cent silver nitrate solution.

Vulvitis.—Together with the treatment of the original focus of infection, moist swabbing of the vulvar surface and cauterisation of the infected vulvar glands with silver nitrate 1 per cent and dusting the parts with the compound dusting powder referred to above should be carried out. In severe cases, the vulvar surfaces may be kept separated with gauze soaked and wrung out in a solution of subacetate of lead. This relieves pain and also prevents extension of excoriations. In the resolving stage, the use of stimulating lotions such as zinc sulphate is beneficial.

Bartholinitis.—is generally unilateral to commence with, but may be bilateral.

Treatment.—If the duct alone appears to have been infected, the infection may be aborted by injecting a small quantity of electrargol into the duct with a blunt pointed hypodermic needle once or twice daily. The process should be repeated for 2 to 3 days. If the gland also is infected, hot hip bath three to four times daily and evaporating lotions such as lead lotin with or without opium may be ordered in the acute stage. Later, when the acute stage has passed off, the gland and the duct should be excised, the parts drained and treatment continued as in vulvitis.

Vaginitis and Cervicitis.—Swabbing the parts with pieces of gauze soaked in 1/2000 biniodide of mercury lotion and then dusting with the compound dermatol powder are of primary importance. The erosions in the vaginal mucous membrane are treated by the application of dichloramine in oil or lead lotion with or without opium. In cervicitis, the cervical canal is treated by application of 1/2 to 1 per cent picric acid in glycerine, 1/4 to 1/2 per cent acriflavin or mercurochrome or 50 per cent formaldehyde in glycerine. Erosion of the cervix should be treated by the application of iodised phenol or 2 per cent picric acid in rectified spirit. Tamponades soaked in antiseptics such as 10 to 20 per cent ichthyol glycerine, dilatation and curetting of the cervical canal and vaccine therapy are all invaluable in the treatment of cervicitis, especially in chronic cases.

Endometritis, salpingitis, and salpingo-oöphoritis.—In acute cases rest in bed in Fowler's position, morphia suppository and ice bag over the hypogastrium should be ordered. When the acute stage has passed off, the condition should be treated as in cervicitis. Hot antiseptic vaginal douches are beneficial in these cases. Generally, sooner or later, recourse to surgery will have to be taken in these cases for a radical cure.

Caisson sickness—A study of the cases which occurred on Narmudda Bridge Construction*

● Dr. P. J. Bhat, L.C.P.S., (Bom)., Medical Officer, Loyalka Hospital, Pilani, Jaipur State

The Caisson sickness is not one of the common diseases which an average medical man meets with. It is an occupational sickness arising only among workers who are employed in the pneumatic sinking of the concrete monoliths in a bridge construction or who are professional divers. Before the advent of the modern engineering, the disease was known as *Divers's Disease*. It is mainly evidenced by the occurrence of a diffuse, unbearable, agonizing pain, sometimes followed by complications of which various forms of paralysis present a tough problem.

The Disease was first described by Triger (1841) in his masterly work, *Compte Rendus*. He was followed by M. M. Pal and Watella (1854) who further enriched the study. That famous physician Gal published his observations on the sponge divers of Greece (1872). But the period of scientific speculation as to the real cause of disease was ended by the publication of the studies of Paul Bert, as embodied in his book *La pression Barometrique* (1878). Subsequent studies have only confirmed the findings of Paul Bert. The further researches of Paul Bert, Von Schrotter and Mager have left very little which is not known. The English Medical Profession, though acquainted earlier with the works of Maxon, was furnished ultimately with the authoritative work of Leonard Hill. It is mainly due to Leonard Hill's researches that the original thesis of Paul Bert was accepted by the scientific world and the disease is known in its present form.

So far the history. Let us proceed to survey the other etiological factors. Let us first study the influence of age on the production of the Caisson illness. A study of Table I would show that higher the age, greater was the susceptibility towards this sickness.

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Table 1

Age	No. of workers	Cases	Percentage
20—30	110	49	44.5
30 to 40	67	41	61

(This table is taken from American Experiments)

On Narmudda Bridge construction, we had only admitted workers between 25 to 40 for Pneumatic Sinking and as such this etiological factor could neither be confirmed nor contradicted.

Season or soil seems to have no significance. Only fat people seem to fare badly with the air-lock. Therefore, as a precautionary measure, fat workers were not admitted for the purposes of air-lock on the works.

Table 2 indicates it sufficiently.

Table 2

	Spare	Medium	Heavy
Lost little or no time in sickness	25	14	8
Taken sick	28	22	36
Paralysed	2	3	8
Died	—	—	3

(From American Experiments)

Blood pressure, it is now conclusively known, has no relation to the production of this illness. The researches of Hegel and Mayor indicate that "Blood Pressure is independent both of the height and celerity of the compression. It has been further seen that rise of the atmospheric pressure has no bearing on blood pressure. At the same time, sudden or gradual fall of the air pressure has also no effect on it. The blood pressure does not vary and when it varies, it is most insignificant".

Debility, previous illness, and a weak heart are supposed to increase the susceptibility towards the caisson illness. This is a very important factor which should not be overlooked in the medical examination of the workers concerned.

Signs and Symptoms

The most prevalent complaint is pain in the ear. It begins as soon as the air-compres-

sion begins in the chamber. The pain is continued all throughout. It is less if the ears are previously cleaned. Oftentimes, it is accompanied with hæmorrhage. The character of the pain is peculiar. It appears as if some air is striking against the tympanic wall of the ear. Deafness has resulted in some cases.

Vertigo is another symptom. The patient feels dizzy and has staggering gait. He complains of whirling sensations: headache usually accompanies.

But the most important symptom, which the medical officer is called upon to treat, is that of *bends*. *Bend* is the term applied to a form of myalgia which is produced by caisson sickness. It occurs anywhere, mostly in the extremities. The pain is diffuse in character and is very extensive. The patient is not able to describe it or locate its exact position. Pressure seems to relieve the pain but not much.

The onset of the pain is sudden. The spread is equally rapid. It is usually accompanied with arthralgia.

Table No. 3

Total cases	Bends	Percentage
57	53	95.1

(Narmudda Bridge figures)

The pain in the chest giving rise to a choking feeling is rarely met with. I had only one case of that type. The pain in the epigastrium simulating intestinal colic is also not uncommon. I had only one case of that variety. Girdle pain also is met with.

The worker oftentimes faints while working under high pressure. Though I had no such case, one of the supervisors told me that he had become unconscious while working at the Sagaing Bridge. He was taken out of the air-lock in the unconscious condition, was re-compressed and slowly decompressed.

The paralysis of the part or an organ is usually the end symptom to develop. It may be transitory or permanent. The paralysis may last for a few minutes, hours, or even days and then disappear or persist (Leonard Hill).

Table No. 4

PARALYSIS			
Total cases	Aphasia	Paraplegia	Percentage
57	2	1	5.3

(Narmudda Bridge Figures)

The paralysis is motor or sensory, but often motor. It may either occur in extremities or may affect any part. Out of the

lesions of the spinal cord, incontinence of urine is most frequent.

It will be apparent that the caisson illness presents the following characteristics: (1) Symptoms are sudden in onset. (2) The highest intensity is in the beginning. (3) The symptoms are polymorphic in nature. (4) The recovery is usual and rapid. The symptoms once established nearly retrogress. (Leonard Hill).

Pathology

There were various theories as to the causation of the caisson sickness. Many of them now have only historical importance. Having been refuted, I do not mention them here. The accepted theory, as stated by Paul Bert is that "the nitrogen dissolved in the body under pressure forms bubbles on sudden decompression and so obstructs the circulation". The obstruction causes ischemia and subsequent paralysis. The chief part in the production of the caisson sickness is played by the nitrogen dissolved according to the Dalton's Law, which, once set free on decompression, may in one case block the pulmonary circulation, in another embolise the spinal cord and produce softening and paralysis there; in yet another, it may produce swelling and emphysema in the tissues.

The pain in the ear is caused by the unequal pressure outside and inside of the tympanic membrane. When both the pressure is equalized, the pain disappears.

The *bends* are caused by the slow desaturation of such parts as fasciæ, tendon sheaths, bursæ, etc.

All paralysis, referable to the central nervous system, are due to nitrogen emboli.

Diagnosis

Very few symptoms simulate those of the caisson sickness. It is difficult to diagnose when paralysis is the first symptom complained of. Chest pain or the girdle pains present some difficulty but history usually settles the diagnosis. *Bends* are easy to recognize.

Prognosis

Recovery is the rule in the caisson sickness. But when paralysis occurs and is extensive, the chances of recovery are few and far.

Fatality is practically nil.

Treatment

Treatment falls in two categories: (1) Medical Lock treatment (2) Medicinal treatment. I will deal with the first at length as it is unusual and interesting.

Medical Lock is a cylindrical chamber of 6' diameter and 12 feet long. It has one entrance with a tight fitting door. It is supplied with an inlet pipe and an outlet one. The patient is put in the chamber and the entrance closed. The air is continuously transmitted to the chamber until the air pressure equals the pressure to which the worker was exposed while working in the air-lock.

He is kept under the same pressure for 10 minutes, then the air is slowly allowed to pass out by widening the outlet valve, uniformly and slowly. The first process is called the compression and the second one the decompression.

As a rule the pain is relieved completely, at least the symptoms lose their intensity. The slow decompression does the rest and the patient is relieved of his troubles with one recompression and decompression only.

It often happens that patients are not cured with one compression-decompression. In such cases two or sometimes three recompressions are necessary.

Table No. 5

Cases	Cured in one compression	Cured with two compressions	Cured with three compressions	Not cured
57	45	7	4	1

(Narmudda Bridge figures)

Regarding the technique of compression and decompression, I have found uniform rate of compression most effective. On Narmudda Bridge works I usually gave compression at the rate of 1 lb. per minute, having placed the patient in the medical Lock. Having reached the required pressure, the decompression was done as follows:

The first 5 lbs. were decompressed within 5 minutes; the second five in 10 minutes, the third five in fifteen minutes, and so onwards.

This technique gave us entire satisfaction so far. But unfortunately medical Lock treatment has its own limitations.

It is effective only if it is immediately given. Sooner it is given, that is within an hour of the onset of the symptoms, the cure is cent per cent. But if the time is allowed to elapse, say, more than six-hours, then the medical Lock treatment is generally ineffective.

Further, the cases of *bends* are most amenable to medical Lock than the medicinal treatment. The cases of paralysis, as a rule, do not yield so readily.

(Note.—One of our cases—Ganpat N. suffered from gradual loss of speech. He was shown to me on the sixth day of the onset of the symptoms. The medical Lock treatment was decided. I gave him two recompressions with massage on the throat. The case completely improved. The details of this case are already published).

A casual question is often asked on the Bridge works whether the medical Lock treatment would be harmful in any condition? I may cite one case. Ramu Annayaba suffered from transitory paralysis of the lower limbs after the first medical Lock treatment was given. Fortunately the paralysis passed away under ordinary medical treatment. But for this, I have seen no ill effects after the medical Lock treatment.

Anodynes and analgesics are useful in the treatment of *bends*. The paralysis is treated on the same lines as one caused by an emboli. Aspirin and morphia have their uses and are distinctly effective.

I may be allowed to end my article with a short observation of Dr. Graham Blick. "The treatment after the establishment of paralysis is that of all organic nervous disease. One can only wait on nature's efforts though in this disease, *the nature is kinder than usual.*"

Col. Bholanath, President of the Indian Medical Association (1935), touched all the important towns in his Madras Itinerary in December last. He stressed on the need for unity and concerted action. He pleaded that the I.M.A. should be made as strong and representative as the B.M.C. When he left Madras, he reported that the results of his tour were entirely satisfactory.

The recent decision of the Government of India to establish a bio-chemical laboratory, preferably in Calcutta, for testing of drugs is a welcome move on its part. It has been reported that the Central Government had no long delayed action on the report of The Drugs Inquiry Committee on the plea that it is a matter solely concerned with the Provincial Governments. The Central Government has now addressed them on the need for giving effect to the important and urgent recommendations of The Drugs Inquiry Committee.

Col. J. Norman Walker, I.M.S. (Retd) said in connection with the opening of the new Sanatorium at Anantagiri, Hyderabad (Deccan), to a press interviewer, that "what he would impress upon the minds of the Public is that a Tuberculosis Sanatorium is not the beginning and end of the fight against Tuberculosis. It only forms one of several anti-tubercular measures." The tuberculous patients are classified in four grades (1) the first group which can be treated at home, (2) the second group pertains to dangerous types which are removed to a separate section of the Isolation Hospital for modern treatment, (3) the third group comprises of patients who can be treated at the General Hospital, (4) the fourth includes recoverable cases of the disease who are advised Sanatorium treatment.

Solar Radiations as observed in Jamnagar with brief Notes regarding Climatic & Atmospheric conditions of Jamnagar during the year 1934-1935

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

It is necessary to study the geography and climatic and atmospheric conditions of the place where a Solarium is situated as these factors determine the intensity of Solar Radiations at that place and their variations throughout the year, a knowledge of which is essential to fix the dosage. In this paper I propose, therefore, to give the salient features of the geography and meteorology of Jamnagar.

Jamnagar is the capital of Nawanagar State (also called Jamnagar State), a first class Native State in the North-West limits of the Peninsula of Kathiawar—a province of several large and small states on the west coast of India. The State is between latitudes 22-58° N. on the North and 21-43°-50° N. on the South; and between longitudes 69-11° E. on the West and 71-34-30° E. on the East. It is bounded on the North by the Gulf and Runn of Cutch and on the West by the Arabian Sea, and the Runn of Okha (of Gækwar of Baroda), and on the South and the East by several other States.

The State is famous for its Bedi Port, so well known for its development and trade in India and abroad.

The port is situated in the North-West at a distance of 5½ miles from the place where Solarium is situated (the only one of its kind in India, and the third in the whole World). The small village of Bedi is about 3 miles from Jamnagar. The port stands on the Bedi Creek at a distance of about a mile towards the North-West from the Rozi Creek on the Gulf of Cutch. The Flag staff station of the Island is at the Rozi temple at a distance of about 7 miles from Jamnagar.

The area of the State—the largest in the province—is 3,791.3 sq. miles (out of 23,500 sq. miles), and the population is 4,02,192. The area of Jamnagar is 1.33 sq. miles with a population of 55,056.

Although the Province comes within the influence of the South-West Monsoon, its

SOLAR RADIATIONS DURING THE YEARS 1934—1935

Month and Year	Total Radiations				Infra Red				Ultra Violet			
	Min.	Average	Maximum	Average	Min.	Average	Maximum	Average	Min.	Average	Maximum	Average
May 1934...	67—88	84	57—91	87	55—92	81	63—93	84	5 ¹ —52	30	23—52	37
June ...	3—84	50	4—91	65	0—85	50	1—98	65	0—43	18	0—49	26
July ...	4—64	28	12—86	61	2—72	28	16—87	60	2—30	9	6—37	25
August ...	2 ¹ —75	13	5—100	59	5—72	13	2 ¹ —100	62	0—22	5	2—59	27
September ...	10—83	35	10—100	87	6—86	35	6—100	84	2—27	10	2—51	38
October ...	16—35	72	81—100	89	19—91	76	80—97	88	9—40	22	31—51	41
November ...	22—87	68	85—98	83	31—92	79	86—99	92	9—31	21	34—54	43
December ...	36—83	63	65—94	83	40—85	68	75—95	86	12—34	22	31—54	44
January 1935	1—94	65	70—100	86	2—85	62	69—94	83	2—38	20	4—57	49
February ...	23—82	67	56—95	84	41—80	69	72—91	82	12—42	28	36—53	50
March ...	6—88	54	15—95	83	2—73	45	8—90	78	0—40	22	7—65	49
April ...	12—85	66	72—96	85	10—69	66	73—90	82	9—45	29	41—62	51

rain-fall records fall far short of those of the Peninsular India. The average rainfall in Jamnagar during the last 5 years comes to 23.02 inches. The amount of total rainfall varies considerably in different parts of the State and the province. Kandorna, Kileshwar and other places generally record more rainfall than other places; while the Baradi places towards the Okha Port register generally less.

Places in the Gir have the heaviest rainfall in Kathiawar. The average rainfall at Rajkot is about 28 inches, at Bhavnagar about 26 inches and at Gogha under 20 inches. At times, owing to the failure of the South-West Monsoon, the rainfall is as little as a couple of inches only. The average rainfall in Kathiawar is 22.59 inches.

The climate of Kathiawar is generally healthy and pleasant. January, February and March are frequently foggy months. Fogs are more marked at early morning and day-break and are

dispelled by the sun in the morning. The foggy mornings are generally followed by very hot days. April, May and June are the summer months; rains generally begin in the middle or the latter part of the month of June. Again, September and October, though cloudy, are very hot. The last months of the year are generally cold. In September and October or October and November malaria is frequently prevalent in the greater part of the Province, when the climate undergoes a change.

Although the barometer readings at Jamnagar for the year 1934-35 will be found in the annexed table, it is worthy of note that upto the year 1884 the thermometer seldom went above 110° in the shade in summer and never below 42° in the winter. Generally it was about 102° and 104° in the summer and about 50° and 53° in the winter in the province. Rajkot and Wadhwan are generally hotter than Jamnagar while Ahmedabad and Gujarat are still hotter.

CLIMATIC & ATMOSPHERIC CONDITIONS

Month & Year		Barometer			Thermometer				Humidity			Velocity of wind			Dir. of Wind	Clouds
		Min.	Max.	Avr.	Min.	Avr.	Max.	Avr.	Min.	Max.	Avr.	Min.	Max.	Avr.		
May	1934	29	30	29.2	70—85	76	94—105	97	43	91	77	5	15	9	WSW	Clear
June	...	29	29	29	76—88	80	87—102	95	50	95	53	6	20	10	WNW	
July	...	29	29	29	71—80	77	80—93	89	75	98	81	6	16	10	WSW	K.SK.
August	...	29	29	29	74—80	77	80—92	88	86	94	92	5	19	9	SSW	K.NK
September	...	29	29	29	71—76	74	86—94	91	69	97	83	2	19	6	WNW	K.SK.
October	...	29	30	29.3	61—76	67	89—101	94	34	77	60	2	8	5	ENE	K.SK.
November	...	29	30	29.9	50—69	60	67—95	88	23	91	57	2	8	4	SSW	
December	...	30	31	30	49—66	56	77—88	83	31	90	59	3	6	4	NNE	SK.
January	1935	29	31	30	40—56	49	57—84	73	16	72	43	3	6	4	SSW	SK.KN.
February	...	29	30	29	49—60	55	74—95	82	38	95	79	3	9	4	WSW	SK.
March	...	29	30	29.1	63—77	74	87—104	93	31	86	63	4	11	8	NNW	SK.
April	...	29	30	29	55—78	62	81—98	91	38	87	63	4	11	6	ENE	SK.
															WSW	
															ENE	

K. Cumulus. SK. Strato Cumulus. N. Nimbus. KN. Cumulo-Nimbus.

CLINICAL MEMORANDA

A CASE OE MOLLUSCUM CONTAGIOSUM

By DR. H. A. MANIAR, FELLOW
DERMATOLOGICAL SOCIETY, (LONDON),
M.R.C.P., D.T.M., L.M., M.B.,B.S.

Professor of Dermatology, Grant Medical College,
Physician, Skin Department, Sir J. J.
Hospital, Bombay

The patient Mr. X, approached the skin dept., (Sir J. J. Hospital) with multiple, round growths on the skin, the duration of the same being 3 weeks only.

Some of the lesions were dome-shaped and showed a dimple in the centre, their colour being the same as that of the surrounding normal skin.

On squeezing the lesion, thick white material (like cream) came out through the central

advice) and the earliest lesion is surrounded by a group of smaller satellites. They may occur anywhere on the body. In certain cases, secondary infection is likely to occur due to extraneous organisms, the common one being the staphylococcus. The lesion becomes painful and swollen and suppuration occurs. Then it bursts and cures itself.

The disease is contagious and hence the adjective 'Contagiosum'.

Since there are practically no symptoms, a case with multiple molluscum tumours is likely to be mistaken for a vesiculo-cutaneous or nodulo-cutaneous syphilide. But in the former there are no other stigmata viz., lesion or lesions on the genitalia or scars, involvement of glands, lesions on the mucosa etc.

Tumour or tumours of short duration with a central umbilication and a creamy discharge on squeezing go to form a clinical syndrome which is pathognomonic of this disease.

In Europe, I had many opportunities of seeing such cases. According to the history of the patients, the origin was traced to their attending the public baths (Turkish ones in particular).

In Bombay, this disease is rare judged from my own statistics. I have come across only two cases of this disease within 3 years in the Skin Dept., of the J.J. Hospital, Bombay. None of these two patients had gone to public baths prior to this affection.

This disease is fortunately rare, but I wish to request other dermatologists to throw light on the problems governing its etiology.

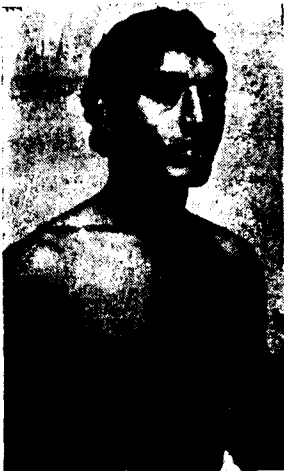
The treatmet consists in the application of pure carbolic acid liq. on the surface and also in boring a dental bur (dipped in acid carbolic) into the centre of individual lesion.

Other remedies are freezing with CO₂ Snow and X-Rays.

These patients should necessarily be informed of the contagiousness of the disease, a very useful procedure for prophylaxis.

The rarity of this disease in Bombay has induced me to publish the case.

My thanks are due to Major S. L. Bhatia for affording the facilities of photography at the Physiology School, Grant Medical College, Bombay.



depression or umbilication (vide picture, the lesion to the right of the nipple), a very salient feature of this disease.

A brief outline of its clinical features will not be out of place.

The lesion begins as a minute round growth in the skin. It grows slowly till it reaches the size of a split-pea or slightly larger and causes no symptoms.

The lesion is round, raised or dome-shaped and shows a dimple in the centre. The colour is that of normal skin or pinkish. If the lesion is squeezed, thick, cream-like white material, comes out through the central depression. (A very important diagnostic point).

The lesions are multiple (this is the stage when the patient approaches the doctor for

A CASE OF LOBAR PNEUMONIA WITH PNEUMOCOCCAL MENINGITIS

By DR. P. MUKHERJI,

Assistant Teacher of Pathology, Ronaldshay
Medical School, Burdwan
AND

DR. ABIBUSHAN MUKHERJI, Burdwan

A boy of 14 years, a student, returned home after his morning class at about 10-30 a.m. Soon after, he took a swimming bath in a small rivulet for about 2 hrs. After he took his mid-day meal at about 1 p.m., he suddenly got high fever with rigor and convulsions.

The following signs and symptoms were observed by the attending physician:—

Fairly well nourished. Spleen enlarged (so existing for a long time). Chronic conjunctivitis with a staphylococci in one of the eyes (existing for about one year).

Temperature 105°F., Pulse 105, Respiration 40 per minute.

Abdomen: enlargement of the spleen up to 4 inches from below the costal arch, liver normal, no flatulence.

Lungs: A most careful examination did not reveal anything abnormal, heart beats normal.

Nervous system: head fully retracted, thighs flexed against abdomen and the legs against the thighs, knee jerk exaggerated, Kernig's sign present, patient takes even water with much difficulty, not fully conscious.

Blood was examined by one of us. No malarial parasites in both thick and thin films, absolute and relative neutrophilia.

40 c.c. of Anti-meningococcal serum was given intramuscularly at about 7 p.m. on the same day. No improvement in the condition followed. He was restless throughout the night. Lumbar puncture was done the next day at 11 a.m. and 40 c.c. of the same serum was given again, but intrathecally, after withdrawing the necessary amount of cerebro-spinal fluid. The c.s. fluid was clear. After the spinal drainage, the patient became much quieter and remained so for about 3 hrs. The temperature came down to 103° F., and the patient, unlike before, could now be roused from stupor. Even now, a close examination of the lungs revealed nothing abnormal. On the morning of the third day, the temperature came down to 102° F., and the patient looked better. A.M. Serum given intramuscularly. It was only on this day that signs of lobar pneumonia were discovered on the right side. On the evening

of the same day, temperature came to normal and there was marked general improvement. The patient eventually recovered from pneumonia and meningitis.

Bacteriological examination of the c. s. fluid.—A culture was made on agar media and it showed growth of pneumococci on the third day. Smear from the culture showed, under microscope, gram-positive diplococci.

Remarks

- (1) Anti-meningococcal serum had, for obvious reasons, given no effect.
- (2) Beginning of the signs of improvement was noticed only after lumbar drainage and the improvement can, therefore, be reasonably attributed to this.
- (3) It looks probable that both the lungs and the spinal-meninges were affected simultaneously, though the physical signs in the right lung were only noticeable afterwards.

The case was treated by Dr. M. Nazeem, B.Sc., M.B., and reported by the writers with his kind permission.

A RARE CASE OF POISONING

By DR. M. A. RAHIM, M. S. M. F. (Pb.)

Civil Dispensary, Nowshehra Virkan
Gujranwala, Punjab

One Mr. Jogindar Singh accompanied by his two years old son, Master Anand Singh, came to the out-door department of this hospital on 20-11-35. The father gave the following history regarding his and his son's trouble for which he sought treatment:

While Mrs. Jogindar Singh was peeling and cutting potatoes for cooking, the boy, playing close by, took a piece of the potatoe and put it in his mouth—as is the wont with babies. Shortly after, it began to cry when the mother, on examining its mouth, found the tongue, lips, cheeks and eyes enormously swollen and red. She noticed considerable salivation also. Her husband who was close by took out the potatoe from the baby's mouth. In order to test whether this piece of potatoe was the cause of the trouble, he himself put it in his mouth when he was also similarly affected. Within half an hour after this, both the father and the son attended the hospital with that piece of potatoe.

On examination of both the father and the son, it was found that whole of the tongue and the buccal mucosa were congested and red. Lips were hanging with marked swelling

and redness. There was a lot of salivation. Their eye lids also were swollen but pupils were not dilated and reacted to light normally. No visual disturbance. Respiration was not troublesome but deglutition was not possible. Pulse and temperature normal.

Treatment.—A concentrated solution of Mag. Sulph was given by means of a nasal tube to induce purgation. The father was given a pot. chloras gargle besides, while the baby's mouth was swabbed with hydrogen peroxide and later with boro-glycerine. Nasal feeding for two days. Warm Anti-phlogistine applied in front of the neck to avoid the risk of inflammation spreading to the respiratory passages. On the third day both of them recovered from the troublesome symptoms.

Comments

That piece of potatoe was forwarded to the Chemical Examiner, Punjab, through the Civil Surgeon, Gujranwala, for analysis. A report was received from the former that it contained a poison named "*Solamine*", a poisonous narcotic substance contained in the stalks and berries of the potatoe plants belonging to the genus *Solanoe*.

Poisoning by this medium is very rare and its symptoms are both local and general. Local irritant symptoms are as observed in the cases under reference while the general symptoms (not present here) such as thirst, vomiting, diarrhoea may also be present and later, convulsions, delirium and coma may end the scene.

Germinating potatoes contain this poison in a relatively larger and therefore toxic quantity and it is well that we do not use them at all.

AN INTERESTING CASE OF MAGGOTS IN THE NOSE

By DR. HARIDAS DEY,

Late Senior House Physician, Campbell Hospital,
Calcutta, Raiganj, Dinajpur

A Mohammedan lady, aged about 40 years, complained of constant oozing from her left nostril of serous exudation which was very offensive in smell. She was treated by a quack who put some juice of Calandula leaves (*Ganda Ful*) into her nose to check the discharge. This had no effect. When I saw her, I found the base of the nose much swollen with plenty of foul smelling discharge. Naked eye examination did not reveal the underlying cause. Tentatively, I swabbed the interior of

the nose with adrenaline solution, advised hot fomentation externally and gave her Cal. Lactas gr. 10 to be taken every 3 hrs.

Next morning, swelling was much reduced; but the offensive discharge continued. I cleaned the interior of the left nose with warm boric lotion. I swabbed the upper portion of the nostril with adrenaline solution; but while withdrawing the swab stick, I found, to my utter astonishment, one mature maggot coming out with the swab stick. Calomel was at hand and I insufflated the same into her nose. Within 5 minutes 40 maggots came out! I irrigated the nose again and painted the interior with a solution containing calomel gr. 10 in 1 oz. of glycerine. Her recovery from this day onwards was uneventful.

The points of interest in the case are:

- (1) some cases of nasal discharge, especially if it is unilateral, should be examined for *myiasis*, not an uncommon cause in our country.
- (2) The effective use of calomel in place of oil of terebinth—a time honoured remedy.

A CASE OF PUERPERAL INSANITY AFTER ECLAMPSIA

By DR. SHORASBI CHARAN
MAJUMDAR, L.M.F.

Medical Officer, Charitable dispensary
Kunduli, Howrah

I was called in to see a Hindu pregnant lady of 9 months' duration having fits at 8 a.m. on the 16th October 1935. She gave birth to her last child 12 years ago. The patient had oedema of the lower extremities and scanty micturition for the last few days—the former probably accounting for the latter. Abdominal palpation revealed that the child was presenting by the vertex. The foetal heart sounds were audible. The external os was not dilated owing to the absence of labour pains. To control the fits, morphine and atropine $\frac{1}{4}$ and $\frac{1}{16}$ gr. respectively was injected subcutaneously. Chloral hydras gr. 30 and pot. bromide gr. 20 was also given per rectum. In spite of these measures, the fits recurred every 15 to 20 minutes, each fit lasting for 3 or 4 minutes. Two hours after, morphine $\frac{1}{4}$ gr. was again injected and at about 11 a.m. the fits stopped altogether. A diuretic mixture, containing pot. citras, hexamine, ext. punarnava liquid, Tr. digitalis etc., was given.

Two days later, *i.e.*, on 19-10-35, the fits recurred again in the morning. By this time, œdema had much abated. The external os was admitting one finger. Morphia and atropine injection was given once again. Glucose 10 c.c. of 12% solution was given intravenously. Rectal bromide and chloral hydras was repeated whenever necessary. The fits stopped temporarily only to reappear again at the dead of night—this time accompanied by labour pains. A dead but mature foetus was delivered normally early next morning.

After delivery, she became unconscious and the fits recurred (20-10-35). Treatment to control the fits repeated. Besides, a rectal saline with glucose was now administered and the distended bladder emptied by catheter.

There was now a rise of temperature which together with coma lasted for 2 days. After this period she developed symptoms of maniacal delusion. 5 or 6 days later, symptoms began to abate and she was eventually cured.

This case was seen and treated by me in consultation with Dr. Jatindra Mohan Ray, L.M.F., of Jhikra.

Points of Interest

- (1) Eclampsia in a multipara.
- (2) Fits before, during and after delivery.
- (3) Insanity during the puerperium.
- (4) Simple medical treatment giving the best results.

PRACTICAL SUGGESTIONS

[The following notes were taken down from the first lecture on Tropical medicine by Dr. S. P. Bhattacharjee, M.D., Acting Professor of Tropical Medicine at the Calcutta School of Tropical Medicine during the L.T.M. course of 1933. Prepared by Dr. U. Das Gupta in collaboration with Dr. B. B. Mandal.]

32. Mortality in the Tropics.

33% of deaths in tropical countries is due to preventable diseases. Tropical climate has got much influence on the diseases as shown from the statistical return of the pathological post-mortem cases.

DEATH DUE TO	LONDON	CALCUTTA	VIT. STAT.
1. Tuberculosis	... 18.4%	21.9 %	21.5%
2. Other diseases of the Respiratory system	... 16.8,,	27.18,,	48.7,,
3. Diseases of the Circulatory system	... 20.3,,	10.5,,	5.4,,
4. Diseases of the Digestive system	... 7.5,,	12.0,,	7.2,,
5. Diseases of the Urinary system	... 8.6,,	6.85,,	1.8,,
6. Diseases of the Nervous system	... 11.9,,	7.4,,	4.1,,
7. Malignant growths, etc	... 18.8,,	4.5,,	1.2,,

33. Pitfalls in Tropical Diseases.

1. Combination of diseases is more common in tropical than in temperate climates, *e.g.*, Hookworm disease may further be infected with T.B. and malaria.

2. There is a chance of abortive attacks on account of lowered immunity and tolerance, due to bad hygiene and bad sanitation.

3. Laboratory findings.—they should not be believed always. Further interpretation of the laboratory results is required.

34. Physical agencies causing tropical diseases.—

1. Climate.—(a) Maximum temperature.
(b) Minimum temperature.
2. Humidity.
3. Ventilation.
4. Rainfall.
5. Barometric pressure.

35. 1. Direct effect of climate.—

- (a) The maximum temperature lowers the vitality and extracts body heat.
- (b) The minimum temperature causes frost bite.
- (c) Excess of light causes by its direct action (i) Dermatitis and (ii) Night blindness.
- (d) Deficiency of light causes: (i) Rickets and (ii) Osteomalacia.

2. Indirect effect of climate.—

It helps the growth of insects which carry diseases.

3. Effect of Temperature.

- (i) The cool climate soothes the body, and thus it is always better.
- (ii) The hot climate causes exhaustion.
- (iii) Metabolism is brought below its par.
- (iv) Heat causes torpidity, langour and lethargy and then causes tropical Neurasthenia.

36. Rays of the sun.—(a) Visible and (b) Invisible.

- (a) Visible rays.—
 - (i) Heat ray—infra-red and red.
 - (ii) Luminous ray—orange, yellow and green.
 - (iii) Chemical or actinic ray—violet and blue.
- (b) Invisible ray.—indigo and ultra-violet.

Effects of various rays.—

- (a) Heat ray causes.—
 - (i) Heat-stroke,
 - (ii) Tropical Anæmia and
 - (iii) Tropical Neurasthenia.
- (b) Luminous ray causes.—
 - (i) Headache and
 - (ii) Night blindness.
- (c) Actinic ray causes.—
 - (i) Solar dermatitis,
 - (ii) Sun-stroke,
 - (iii) Heat exhaustion and
 - (iv) Pigmentation of the skin.

In moderate doses it has got tonic action.

37. *Tropical Liver* is common among foreigners due to excessive intake of alcohol and protein diet. This may be accompanied with amœbic infection.

Treatment of Tropical Liver: starvation diet, only carbohydrates, such as sago water and fruit juices. Medicine.—Hg. Subchlor in fractional doses followed by a dose of saturated solution of Mag. Sulph.

38. *Tropical Anæmia*.—According to some it is due to the influence of climate and other physical agencies, but according to others it is due to some infection plus climate.

Spahlinger's Vaccine for the prevention of tuberculosis in cattle has been tested on a large scale in Great Britain. The Joint Committee of the Medical Research Council and the Agricultural Research Council of England have issued a report that more definite information is needed regarding the preparation and use of Spahlinger's Vaccine before it can be introduced into practical farming. Further experiments would be required concerning:—

- (a) whether the tuberculin test interferes with vaccination, as suggested by Spahlinger,
- (b) the best dose and manner of vaccination,
- (c) the suitable age of the calf for vaccination,
- (d) the time after vaccination at which immunity appears and how long it lasts,
- (e) the persistency of immunity in animals exposed to infection by natural means.

Out of 77 applications from qualified medical men for post-graduate course in Tuberculosis to be held in Calcutta, under the auspices of The King George Thanks-giving (Anti-Tuberculosis) Fund, 25 have been selected from different Provinces and States. The course is held at The All-India Institute of Hygiene and Public Health, Calcutta and begins on 6th January, 1936.

The 13th Conference of the All India Medical Research Workers was held in Calcutta during the second week of December '35 over which Sir Frank Connor presided. He emphasised that the functions of this body were in no way executive and their views and resolutions were only in the nature of recommendations which are likely to influence the Scientific Advisory Committee. He suggested the formation of two more Advisory Committees on nutrition and maternal mortality and child-welfare in addition to the five already existing on Cholera, Malaria, Plague, Leprosy and Rabies. Lt. Col. Jolly addressed on "Some aspects of the work of the Conference of Medical Research Workers" in the course of which he dwelt on the genesis of the various Research Institutes in this country and the work so far done and expected to be done in future.

Dr. K. H. Raval, L.C.P.S., has been appointed as honorary anaesthetist in the Civil Hospital, Ahmedabad, for a period of three years.

(From our own correspondent).

The following were the recipients of Sub-Assistant Surgeon, J. M. Pandya Memorial Prize:—

Mrs. Malati Bai, L.C.P.S., Poona, 1933.

Mr. Jethi Lal Rati Lal Chathurbuj, L.C.P.S., Bhuj, Dt. Karachi, 1934.

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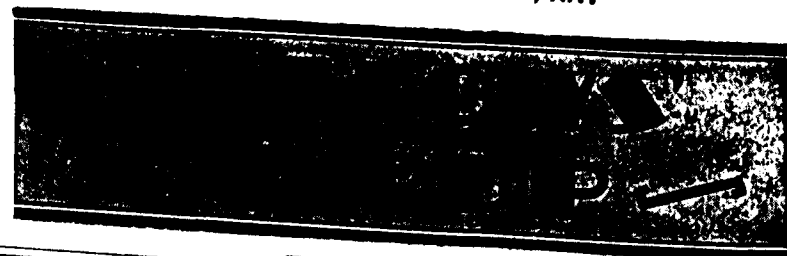
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FEBRUARY 1936

The Standing Committee of the All-India Medical Licentiate's Association has accepted the invitation of the United Provinces to hold the next annual conference of the Association at Agra.

THE DEATH OF KING GEORGE V

The news of the passing of King George V after a very brief illness has cast a gloom over the entire civilized world. There was no monarch who ever trod the earth but who was so great and glorious, so kingly and kindly, so popular and powerful as the beloved King George. Men of high and low estate, of every creed and colour have laid their respectful and affectionate homage at the feet of the Departed. On behalf of the Indian Medical Profession, we bow our head in profound reverence and in prayer that his soul may find the peace that surpasseth understanding; we offer our heartfelt condolences to the bereaved Queen and King Edward the Eighth whose grief is not in the power of man or woman to assuage.

Tributes have been paid to the various aspects of King George's personality, but we emphasize that, of all his qualities and achievements, his great and Royal sympathy towards the suffering humanity, his well-directed endeavour towards the relief of the sick and afflicted and the Royal appreciation of and support to the physicians of his far-flung empire in their mission of curing and preventing diseases, stand pre-eminent and unequalled. He laid aside a large part of his Silver Jubilee collections for medical

relief in the different parts of his Empire. He took keen interest in medical research.

He was a King of men in every sense of the word. His heart was as large as that of Lord Buddha. His experience of public affairs was as great as it was unerring. Every one who came in contact with him felt peace and power, material and spiritual comfort.

PUBLIC HEALTH IN INDIA

Dr. T. S. Tirumurti's convocation address to the graduates of the Andhra University in November last, extracts from which are published elsewhere, comes as a fitting epilogue to the monumental report on the Public Health in India for 1933 by Lieut. Colonel A. J. H. Russell, Public Health Commissioner with the Government of India.

Both arrive at the same conclusion that the Public Health in this country is far from satisfactory: the one views it from the subjective standpoint of defective education which omits, if without intention, to take into account the disastrous effects of a mere literary education; the other looks at it objectively through the recorded figures of preventable mortality and of the alarming increase in infantile deaths. The one pleads passionately for the imbibition of the principles and practice of health from the very beginning of the student's career, which will not only be a much needed and praiseworthy personal achievement—immensely more beneficial than the mere donning of academical robes—but also a public investment; the other regrets that retrenchments and ill-balanced budgets give rise, at times, to feelings of despondency and pleads for a long view in assessing the necessarily intangible results of public health expenditure.

Yes, both the perspectives are absolutely correct and will, if acted upon, inevitably lead to the apex of Public Health spirit and achievement in our country to the extent of human possibility. If the average Indian, at least the educated Indian, is convinced that health is the greatest of all national assets and that without it neither political freedom nor economical emancipation can be sustained for any appreciable length of time, he is more likely to influence the deliberations in the State Legislatures which give him the power to vote for the good of

the community than is otherwise the case. The standing complaint of the Government of our country is that there is a definite lack of public co-operation in carrying through Public Health measures and that the extent of Public Health expenditure has necessarily to proceed *pari passu* with the extent of the development of Public Health conscience, if waste of money and efforts are to be avoided.

There is no doubt a profound modicum of truth in this attitude of the Government and this lack of co-operation can be attributed directly, not to the intrinsic incapacity or the religious prejudices of the Indian as emphasized by the fair-weather globe trotters or by the racial bigot, but to the defective system of education from the bottom to the top. We heartily endorse the clarion call of Prof. Tirumurti for a re-orientation of the educational policy in which the question of personal and public health should receive a primary attention and for the salutary advice he gave to the University graduates in this respect. We sincerely trust that this had not fallen on deaf years or had not been taken as a fad of a medical man who chanced to deliver a convocation address. There is an utter sense of reality in what he says:

"It cannot be doubted that education is the most desirable ally of sanitation, though it might be contended, not without some reason, that the educational policy has not pursued profitable paths and has, of late, ploughing barren sands. This is realised by the Government and the people and has awakened them to a consciousness that all is not well with education in this country and that it needs a re-orientation and reform in all its branches."

And, perhaps, he could not but help developing such a theme in preference to the usual convocation slogans of literary *versus* technical education, of threatening unemployment, of Hindu-Moslem unity, of the impending political and social duties, and of the various odds and ends of life that face the graduates after their last lingering departure from the gallery of the lecture hall to that of the theatre of life; because

"I have been myself an eye-witness to the haggard look, bent back, sunken eyes, emaciated frame and other signs of poor physique of the graduates, who come up in the variegated colours of their academic robes in an impressive procession to bow before the chancellor and take their degrees. The convocation function, which ought to leave a happy buoyant feeling, has often given me a sense of depression, not only due to the doubts as to the capacity of the graduates to keep their heads above water in the sea of unemployment, into which they are driven from the portals of the University, but also to the melancholy prognosis, that the large majority of them are physically unfit to weather the cruel storms of many diseases which abound in the neighbourhood."

Let us come to the objective side of the question: the ponderous figures and their mute

lessons which Lt. Col. Russell marshalls with unerring logic and prophetic insight regarding the state of public-health in India and his hopes for to-morrow.

Out of six millions and odd total deaths (22.4 per mille) for the year 1933, 214,590 (0.9 per mille) were due to the three main epidemic diseases, cholera, plague and small-pox, which be it noted, have been practically exterminated in Western countries as a result of combined endeavour by the Public and the State. These figures should shame any self-respecting nation and goad it to immediate action. More than one and three-fourth million infants (27% of the total mortality) find a grave within a year of their birth and as the *report* observes:

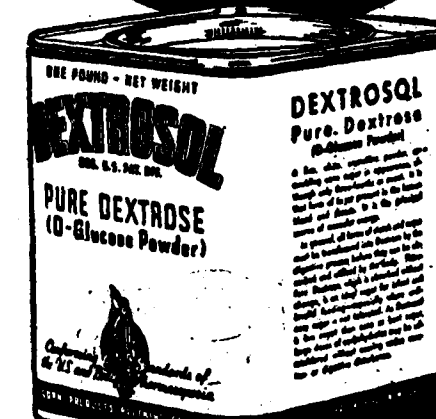
"No Public Health Officer can look on this (italics ours) with any degree of equanimity and if, as has been repeatedly stated, the infant mortality rates of a nation provides an accurate estimate of its sanitary conditions, then India has little cause for satisfaction as regards the state of its Public Health. The further deduction may be made that existing campaigns in the fields of child welfare and maternity relief have had so far little or no wide-spread influence, although no doubt in the restricted areas in which they are carried on a considerable effect may have been produced. It has touched but the merest fringe of the problem . . . In any case, these facts and figures indicate the enormous problems awaiting attack and make clear the extent of the health work facing the new Provincial and Central Governments which will shortly come into being under the reformed constitution."

The next greatest, but insidious foe of our nation, is malaria. Out of 3½ million deaths registered as due to 'fevers', Lt. Col. Russell estimates that at least a million must have been due to malaria. We are inclined to think that it is an under-estimate and we would put the figure tentatively at 3 millions, considering the haphazard, if unavoidable, diagnosis of the out-patient department of hospitals in India. The following observation of Russell contains a profound truth which the medical practitioner and the elected minister in charge, of Public Health may usefully note:

"This terrible mortality is apt to be lost sight of owing to the defective and misleading nature of statistical records and because of the less dramatic nature of the disease as compared with cholera, small-pox and plague, except when a violent epidemic occurs as that of 1908 in Punjab. But year after year in India, malaria is probably responsible for about 20% of the total recorded deaths and many millions of the population experience periods of sickness which cause grave loss of earning power and much economic distress."

We shall not enter into discussion of the other causes of mortality in India; the five chief causes which we had mentioned earlier are sufficient to fill us with gloom and despair. The conditions which bring about such a miserable state of Public Health in this country are perhaps too complex to comprehend and

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still more difficult of eradication. Defective education and the consequent loss of what we may call for want of a better word, *Health-Capital* and *Health-Sense* among at least the educated, its inseparable corollary, the public apathy, and the State mania for retrenchments in departments on grounds of unproductive expenditure; the vastness of the country and the vaster financial resources needed for an extensive and effective Public Health programme—all these are so inextricably woven together in the body-politic of our country that we cannot, with any degree of fairness, single out any one of the causes referred to above as primary, therefore requiring our immediate attention, or secondary, therefore can await solution. A simultaneous movement in all these directions is obviously necessary for the achievement of a reasonable national public health standard; and it behoves the sanitarian, the researcher, the politician, the philanthropist and the Government of our country to work in close unison to make this fair land of ours fit enough to live for the unborn generation.

The hopes and fears of Russell with regard to public health in this country are fully epitomized in his own inimitable way and deserve to be quoted in extenso:

"In last year's report, specific attention was invited to the 'universal and often sweeping reductions' which had been made in public health budgets throughout the country. Preceding sections of this report have made it plain that these retrenchments are still in force; in a number of directions, indeed, expenditure on public health has been even further reduced. In these circumstances, it is impossible to refrain from stressing once more the dangers to which the general population is exposed by the continuance of those so-called economies. These dangers have been less evident and less grave than they otherwise might, because during 1933 India has once more remained free from violent epidemic and has experienced another comparatively healthy year. But unjustifiable risks are still being taken and a heavy responsibility rests on all those who continue to take these risks. The epidemiological history of India does not permit of any degree of confidence in the prolongation of the present period of comparative freedom from epidemic outbursts and we have had a recent warning from the neighbouring island of Ceylon that such outbursts may flare up in devastating fashion without premonitory signs. Whilst there is no intention of giving expression to anything in the nature of scare head-lines, known facts in regard to the epidemiology of disease in this country provide adequate reasons for sounding a warning note, in the hope that public health departments may be more suitably equipped before the next crisis arrives. Even though that crisis be further postponed,—a somewhat hazardous assumption, the facts set out in previous pages of this report make it obvious that existing standards of public health in India are of a low order and, if these standards are to be suitably raised and necessary improvements are to be effected, a much larger proportion of available funds will have to be devoted to the social amelioration and protection afforded by

well-planned public health work. In making demands for additional funds, public health departments are frequently accused of being mere 'spending' departments; on the contrary, in no sphere of human activity can richer dividends be earned than by judicious investment in the conservation and promotion of the health of the people. This fact requires constant reiteration especially at a time when Governments, Municipal Committees and District Boards alike are engaged in the search for further reductions in expenditure.

Retrenchment and ill-balanced budgets may give rise at times to feelings of despondency, and even despair, in the minds of public health officers but, in estimating progress in the public health, the long view is essential and there are features even in the present position from which fresh courage and renewed hope may be derived. For, there can be no doubt that during the past 20 years considerable success has been achieved and, although existing circumstances are not favourable to increased activity and new developments, every effort must be made to ensure that progress is not stayed. Unfortunately, it is always much easier to arouse public sympathy and raise money for the care of the sick than to arouse the same sympathy or raise similar funds for the prevention of disease. "There are many reasons why this should be so, but in spite of the best of these reasons,—the humane promptings of pity towards our fellows,—the old saying is still true—prevention is better than cure." To effect even the slightest reduction in the incidence of sickness, suffering and death must always be, as Sydenham said, "a matter of greater felicity than the riches of a Tantalus or a Cæsus". This great felicity is a reward already earned by many public health workers in this country and is one which should provide renewed strength for the further efforts demanded of them under the difficult conditions existing at the present time."

We fondly believe that the noble call of Tirumurti and Russell will be responded to by all concerned. Otherwise, the nation and its Government will be failing in their essential and primary duty.

CURRENT COMMENTS

We have been asked by friends to state the policy of the All-India Medical Licentiates' Association and its official organ, *The Indian Medical Journal*, with regard to the honorary system of staffing the hospitals and dispensaries in this country. They say that the absence of a policy in this direction will be a dereliction of our duty, specially in view of the facts that:

1. there are a large number of private practitioners who can be harnessed to this work and thus save the tax-payer's money,
2. the hospitals in the West, notably in the United Kingdom, are almost entirely staffed and managed by the profession at large in an honorary capacity,
3. many of the Provincial Medical Associations and the Indian Medical Association

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have been demanding the early introduction of this system on a larger scale than at present,

4. lastly, the success of this scheme particularly in Bombay and Madras—perhaps in Calcutta also—warrants an intensive programme in this direction.

* * *

We agree. But where do we come in—we mean the medical licentiates? Let the enthusiasts of the Honorary Scheme lay their hands on their heart and say whether the medical licentiates are treated fairly and squarely even in this unpaid service. Many differences without distinction and *vice versa* have been made within the scheme which are unwarranted on analogy and utterly insulting in implication. The licentiate in service may have no way of escape from these humiliating conditions imposed in the name of *low standard* by the powers that be on behalf of vested interests. The licentiate in private practice is not going to put his head in this noose and have his self-respect strangled.

* * *

Let us state some known facts.

(1) Those who are merely M.Bs., or L.M.Ps., starting as clinical assistants may reach the stage of honorary assistant physicians or surgeons. At that point their destiny ends. Beyond that point, only those with M.D., or M.S., or M.R.C.P., or F.R.C.S., can come up: those with such *exalted* degrees or diplomas are the wisest physicians and surgeons in Christendom! That means, these degrees alone and not the known experience or actual merit that count in filling up these *superior honorary posts*. We ask, if these conditions are not wholly necessary in paid service, what greater necessity is there for imposing them on honorary service? Every one of us knows that there are some I.M.S. officers and medical graduates in service who occupy highest position in research and office without these exalted degrees and diplomas and who, yet, have discharged their duties with credit and honour to themselves and the profession. *What is sauce for the goose must be sauce for the gander.*

* * *

(2) Leave apart the M.Ds. and M.R.C.Ps., M.Ss., and F.R.C.Ss., and let us take up the M.Bs., and L.M.Ps., and their honorary designations. We do not know the exact designations given to these honorary officers in other provinces but we do know about them in Madras. At one time (probably 1930) it was resolved by a special committee appointed to review the scheme, that both the M.Bs., and the L.M.Ps., should have a common designation, denoting the nature of their duties without emphasis on the degrees or diplomas they may hold. That is to say, they were called as clinical assistants during the first stage of their honorary medical career and assistant physicians or

surgeons in their second and perhaps, the final stage. That was accepted by the Madras Government. But before the ink was dry, the honorary L. M. Ps. were officially addressed as honorary sub-assistant surgeons. A few protests and representations were made; we do not know the end of them. Lately their designation has been made unequivocal, if unjust. We congratulate the Madras Government on their bold stand: it is better to tell unsavoury things openly than disguise them with a mental reservation. The M. Bs., and L.M.Ps., retain the old designation, viz., honorary assistant surgeon and honorary sub-assistant surgeon respectively—though the latter is in contravention to the original order of the Government. But the L.M.Ss., who were till now treated on par with M. Bs. will henceforth be designated as, honorary licentiate medical officer, first, second or third grade according to the term of honorary service. Our local contemporary, *the Medical Practitioner* writes in anguish whether the profession is to laugh or cry. We neither laugh nor cry, because we are for the present simply and deliberately unconcerned with the present type of honorary service. Our reasons are given below.

(3). The third known fact is that the honorary medical licentiate, so far recruited, have only to blame himself for having entered the honorary medical service in which he is not treated honourably. The first insult is, that he cannot be recruited to serve in a *teaching hospital*. The second insult is that he is designated with a service appellation without at least the corresponding advantage of being paid for coolly pocketing the insult. The third insult is that he is not to proceed up to the top of the honorary service—he has to remain mostly as clinical assistant or he may become an honorary assistant physician or surgeon, if he is lucky, but not by the efflux of a pre-determined period of honorary service. He will remain, so long as he chooses, as an unpaid hewer of wood and drawer of water, exactly in the same unenviable position as his colleague in service.

* * *

These are the sharp and long nails with which the coffin of honorary service is prepared by the *undertaker* and the *grave-digger*, *the time*, will dig the earth eight fathoms deep to bury this coffin. On this little mound of earth may well be written the epitaph: *deserving—let not your ghost haunt us any more!*

* * *

We are sure that our remarks will be ill-received by friends who want from us a declaration of policy in reference to honorary medical service; but we are sorry. A deep and intuitive sense of reality has prompted us to come to this conclusion. Our brother licentiates in service have already burnt their fingers in the incessant fire of insults from which, unfortunately they find no way of immediate escape. Why should the licentiates out of service put their fingers to the pot, knowing full well that it is boiling

to scald them? Beware that we have to look around before we leap. At the cost of being accused of vanity or want of vision, we would personally advise the medical licentiates in private practice not to take up this caste-graded honorary service and suggest to those medical licentiates who are already in the frying pan to leap out of it at the earliest possible moment. That is the only course which self-respect would demand and dictate. We fancy that none of the licentiates are so poor in spirit as to voluntarily subject themselves to calculated humiliations.

* * *

It may be said—to an extent justifiably—that we have not looked at this question from the point of view of the tax-payer but that we had viewed it from the narrow, parochial, sectarian view of medical licentiates. Confidently and conscientiously, on behalf of the oppressed and depressed 30,000 medical licentiates of India, we say that we do not plead guilty to this charge. Perhaps, the tax-payer will find no better ally than the medical licentiate in his time of utter need. He knows us more intimately than the titled doctors and if, to-day, his vote is taken on the issue of who is spending his money extravagantly, it will tell a different tale. The tax-payer is not saved, we suppose, by humiliating the licentiates.

* * *

By all means, let us save the tax-payers' money and let us have an honorary medical service in our country—but such a service should be honourable in its terms and conditions of recruitment. No fetish should be made of the difference in degrees and diplomas, so long as the applicant is a legally qualified and registered medical practitioner, subject to the usual tests of experience and merit.

* * *

Is there any such hope that this essential condition necessary for the successful working of the honorary medical service will be accepted by its sponsors and adhered to by its enthusiasts and supporters.

* * *

What is happening to-day with the medical administration, every body knows. The services are caste-ridden and water-tight. What is happening with medical education is also equally known. The 26 medical schools in India are treated as schools for out-castes. Even the little good things that are offered are offered in a spirit of concession and of favour. What is happening with the medical councils of India are also well-known. They are more caste-ridden and more water-tight than the services.

* * *

Unless these states of affairs are mended, we are deliberately of the opinion that the honorary medical service will find no favour with the vast body of private practitioners in this country and without their co-operation it is bound to fail. Its present alleged success is but imaginary and trumpeted as such by an interested few.

* * *

We look around and fail to see in the firmament even a single star of hope. It is cloudy and nothing is visible. The night is as dark as a black stone. We have many premonitions in this, our darkest hour of gloomy night. We feel the invisible prowlers who want to despoil us of our only precious possession left, self-respect. We are fighting with unequal and invisible enemies whose armageddon is rich with the profits of the past and with, at least, equal hopes for the future. We pray that the dark hours of the night may soon pass away and the glimmering rays of the dawn may shame the prowler and restore the profession to an integral whole.

* * *

Neither we nor our association is, therefore, at present interested in this honorary medical service boomed by big guns. *We do not work against it; but shall not work for it so long as the licentiates are treated as cinderellas of the profession. Au revoir. We must meet as equals if the honorary medical service is to bless the server and the served.*

NEWS AND NOTES

OUR BERLIN LETTER

(From Our Own Special Correspondent)

The sphere that stirs the medical world in Germany as everywhere else and keeps it on the *qui vive* is

Cancer.

At the opening of the "*Allgemeine Institut gegen die Geschwülstkrankheiten*" (institute for fighting tumorous diseases), Arthur *Hinze*, Berlin, made a report on the organization for fighting cancer, according to which the diagnosis in most cases presents little difficulty to the specialist. The surgeon and the doctor who give the ray treatment must work hand in hand. The success must show in the end whether the best has been done for the patient. The doctor who treats a cancer case must keep in close touch with his patient and never let him quite out of his sight. Then complete confidence will be established between them and the patient be quieted.

The general practitioner does not have to prove his diagnosis of cancer. It suffices if he supposes it to be so. The special institutes must make the exact diagnosis and prove it. It is best for the general practitioner to discuss each case of cancer with the proper specialist. The best thing a practitioner can do for his patient is to hand over the case in time to the specialist who is to carry on the actual treatment. General knowledge about cancer can be increased by exhibitions, lectures, pamphlets, etc., but propaganda in advertising form will only make the cancer patient uneasy, and frighten the neurasthenic. A medical examination of whole groups of the population is expensive and rather futile.

Ludwig Bayer (Offenbach) goes thoroughly into the question of the *Early Diagnosis of Cancer of*

the Stomach in the German medical weekly, "Der Deutschen Medizinischen Wochenschau." Timely diagnosis means an early operation and is therefore a decisive factor in the course of the disease. It is a startling thing that even to-day most people suffering from cancer of the stomach consult a doctor or surgeon when it is too late to operate successfully. The following formulation by Bergmann may be mentioned in connection with single symptoms: If there is no occult bleeding after the contents of the intestines have been examined for several days (4—8) there is every reason to believe that it is not cancer. Occult bleeding is the most frequent of all symptoms. Of all processes, X-ray examination does the most valuable work for an early diagnosis. The gastroscope will be of great importance when once its use is less dangerous and it is not only in the hands of a few specialists.

In an interesting publication of the "Deutsche Medizinische Wochenschrift" Dietel and Ditsch (Munich) take up the question of the protraction of the disease in cancer of the uterus. They base their remarks on the experience obtained with the patients in the Munich Women's Hospital from 1928 to 1934. Protraction through the patient was supposed when the patient called a doctor more than 8 months after the appearance of the first symptoms. Retardation by the doctor was assumed when he resorted to those measures which, from the symptoms, ought to have been applied to make sure of diagnosis and treatment more than 4 weeks after the first consultation. It was shown that 30.44% i.e. almost a third of the cases, could be declared protracted in this sense, 22.1% by the patients themselves and 8.34% by doctors. No success was reported from the work of enlightenment carried on in recent years, even among physicians. The fact that prescriptions are simply given without any vaginal examination is chiefly responsible for this protraction. Above all doctors should take into consideration that cancer of the uterus does not only come in old age, but it also may appear at any time of life.

The Board of Health in Germany has of late been issuing advice and pamphlets on the fighting of

Diphtheria.

It is interesting to see what is said about protective vaccination. The results are promising but no final judgment can be given yet as to its efficacy. The introduction of general vaccination against diphtheria is rejected. Voluntary vaccination comes into question when cases of diphtheria and deaths therefrom are exceptionally high. As far as one can say, up to now this vaccination is harmless. The reaction is usually slight. Children suffering from tuberculosis etc., should not be vaccinated. It takes from 8-10 weeks for protective forces to form, so that real immunity comes only after three months, its duration cannot be stated exactly. The vaccine used in Germany is under State control.

Diphtheria serum should be used in every case, even if there is only a suspicion. The dose varies

according to how long and how bad the case is, the age and weight of the patient. The doses are based on the following table.

Doses of Diphtheria Serum

Situation and grade of disease	Antitoxin Unit per kg.	1 Year 10 kgs.	6 Years 20 kgs.	11 Years 30 kgs.
Nose diphtheria, slight throat diphtheria ...	100 to 200	2,000	3,000	4,000
Moderately serious diphtheria ...	300	3,000	6,000	9,000
Serious diphtheria in the throat ...	400	4,000	8,000	12,000
Toxic throat diphtheria, croup and diphtheria with measles ...	500	5,000	10,000 to 15,000	15,000 to 20,000

Where necessary these doses must be given repeatedly

Any complaints arising from the injection are immaterial in comparison to the danger of the disease.

The patient's dismissal should depend on the bacteriological tests. Three successive negative results at intervals of two days are desirable. Attendance at school should only be allowed 4 weeks from beginning of the illness. Where healthy brothers and sisters show no signs of the disease within a week, they may go back to school, provided they have been kept quite apart from the patient.

Before the Berlin Medical Society M. Gundel gave a report on protective diphtheria vaccination in the west of Germany up to the present. In two large German towns vaccination had had a favourable influence on the course of the disease. It is hoped that a final opinion will be forthcoming for 1936. According to Gundel, active vaccination against diphtheria is to be recommended from the experience gained in limited, highly infected diphtheria districts.

International Congress of Sports Doctors in Berlin

1936 is the year of the Olympic Games in Germany. In order to draw world attention to the activities of the sports doctors, an International Congress will be held in Berlin from July 27 to 31, 1936 under the auspices of the International Association of Sports Doctors. Dr. Kellerer, leader of the Sports Doctors is to be president. The offices are in the "Haus der Deutschen Ärzte", Berlin SW. 19, Lindenstrasse 42. As the whole field of work is to be reviewed the Congress programme will be arranged on a wide scale.

Prohibited Marriages

The German Cabinet passed a law designed to protect the health of the people through the prohibition of marriages in cases where they are on hygienic grounds undesirable. Marriages are forbidden if:

One of the parties suffers from an infectious disease which might considerably affect the health of the other party or of their children.

One of the parties has been certified as incapable of managing his own affairs or has been placed under temporary guardianship.

One of the parties suffers from a mental disturbance which appears to make the marriage undesirable in the interests of the "Volksgemeinschaft" (companionship of the people).

One of the parties is suffering from hereditary disease as defined in the laws on sterilization.

Before marriage, certificates must be obtained from the appropriate authority to the effect that no hindrance exists on any of the above grounds. Marriages which violate the law are null and void and the parties are liable to imprisonment.

Dr. Bimal Ranjan Dey, while addressing the students of B. W. Medical School, Dibrugarh, on the occasion of the celebration of the Founder's Day said in the course of his speech:

It has become customary with us to observe the Hospital Day and the Founder's Day. Many of you are probably ignorant of the significance of the Founder's Day, the nature and extent of the sacrifice made by the Founder, and the benefits which we and our Province have derived as a result of this far-sighted beneficence. Brigade Surgeon, John Berrywhite bequeathed on the 16th of November 1896 the sum of Rs. 51,000 to be applied towards the founding of the Medical School in Dibrugarh. Let us feel and realise that we owe our existence as medical men to the large-hearted benevolence of this great soul whose tenderness towards the sick and suffering is easily the greatest trait in him. I appeal to you all, therefore, to start a memorial fund to perpetuate the name and glory of this great Founder and use it for the erection of a statue or a bust or at least an oil painting as funds permit and inscribe his brief history in a marble tablet. It is our duty to worship him and venerate his memory."

We heartily endorse the appeal of Dr. Bimal Ranjan. Such a love of the good old Berry-white should be commensurately responded to in the only tangible manner open to us, viz., to erect his statue in the school of his creation to remind the students daily of his greatness and compassion.

Representation of the Medical Licentiates in the Punjab Medical Council is obviously meagre. (Vide Current Comments, I.M.J., Vol. XXIX 12, P. 639.) We congratulate the Punjab Medical Council in accepting and passing the resolution of Dr. Gian Chand Bagganna in this connection. It now rests with the local Government to move in the matter. Many of the Punjab Branches have passed resolutions urging on the Government to remedy this easily remediable defect in the composition of the Council. Will the Punjab Government kindly look up to this matter—it costs them nothing, not even loss of vested interests?

The Sub-Assistant Surgeons are not allowed, so we learn, to do post-mortem in the Punjab. This takes our breath away. We know that, under certain conditions, the S. A. Ss., in other Provinces are allowed to conduct post-mortem, while we also know in one or two provinces no unreasonable restrictions are placed. Even under these conditions accepted as sufficient by other Provincial Governments, the Punjab Government would not allow their officers of the Subordinate Medical Service to conduct the post-mortem. Let the Punjab Government kindly define what is a medical qualification, what is medical registration and what are the legal rights of such a registration. If the Medical subordinates cannot be trusted with a dead body, with what cogent reasons are they allowing them to treat living ones?

The U. P. Medical Conference held at Cawnpore during October last, detailed summary of which had appeared in our December issue, had passed the following resolution in connection with the unwanted and unwarranted recent amendment to the Poisons Act, U. P.

(1) "The U. P. Medical Conference recommends to the Government to be pleased to rescind amendments No. (1) to the rules framed under Section 2 of the Poisons Act and published in the U. P. Gazette, vide Judicial (criminal) Dept. No. 1273/VI-1776-1930 dated 29th September 1933 and No. 1000/VI-1776-1933 dated 15th April 1935, because the said amendments adversely affect Qualified Medical Practitioners in the exercise of their profession and are contrary to the provisions of section 9 (1) of the said Act which specially exempt Medical Practitioners from any rule made under that Act."

There seems to be no sign yet that the U. P. Government is moving rightly and quickly in this direction. Let us hope that good counsel will ultimately prevail.

We congratulate Rai Sahab Drs. Ram Narain Lal and Kunj Behari Lal in having been instrumental in passing the following resolution.

Resolution passed by the U.P. Medical Council on 26th November, 1935.

(2) "That a Sub-Committee of the five members of the United Provinces Medical Council be appointed (1) to bring the United Provinces Medical Act on the lines of the British Medical Act by suggesting amendments and providing in the preamble, the dealing of all matters affecting the Registered Medical Practitioners professionally, (2) to suggest amendments to the code of Medical Ethics in consonance with the provisions of the Medical Act keeping in view the existing conditions in India, and (3) to provide increased representation of the independent practitioners and that of the Licentiates according to their strength on the register."

A similar move may well be initiated by our Medical Council Members in the other Provinces. It will be a right move, though, in view of the prevalent attitude of the Provincial Governments, we are not very hopeful of the ultimate results. Nothing but a drastic overhaul of Medical Services and

Education will prepare the way for such a salutary reform of our Medical Councils.

* * *

A deputation of five representatives of the members of the Saharanpur District Branch of the All-India Medical Licentiate's Association, led by Dr. I. N. Saxena, including Dr. Amba Prasad Sharma, Dr. K. L. Endley, Dr. A. P. Mathur and Dr. J. N. Vaish, L. O., waited on Qazi M. A. Kazmi, advocate and member, Legislative Assembly, at his residence at Saharanpur on December 17, 1935, at 6.30 p.m., in connection with the amendments of the Indian Medical Council Act. The deputation submitted to Mr. Kazmi a written statement urging the inclusion of the medical licentiates within the purview of the Indian Medical Council. Dr. I. N. Saxena narrated the detailed history of the Indian Medical Council Bill and made a strong case in favour of the inclusion of the Medical Licentiates. The deputationists had nearly one hour's discussion with Mr. Kazmi who gave a patient hearing and cleared many points by mutual discussion. At the end, he promised full support and to give notice to the Secretary, Legislative Assembly, of a suitable amendment to the Indian Medical Council Act for discussion in the winter session of the Assembly. Dr. Saxena on behalf of the Association warmly thanked Mr. Kazmi for his kind support and interest he showed towards the Medical Licentiates. (*From our correspondent.*)

SPECIAL ARTICLES

HEALTH AND EDUCATION*

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Public Health—A study in Contrast

It is very depressing but interesting to compare the progress made in Public Health during the last century of British administration in India and during the same period in England. It was only just one hundred years ago that the first steps were taken to organise public health measures in England. It is stated that the stimulus for this was an epidemic of cholera. Chadwick and Symon and the Victorian Sanitarians, who planned the main lines for the progress of public health, will ever be remembered. Compare the State Medicine of England which has become the all powerful social service organisation of that country to-day with our present position.

More than 16,000 medical men are in insurance practice; over 60 per cent of expectant mothers are

*Extracts from his convocation address to the Andhra University, November 1935. Received for publication on 13.12.35. Ed. I.M.J.

attended to in anti-natal clinics; every year 40 per cent of infants and children are looked after in child welfare centres; over 88 per cent of school children receive medical inspection; 140,000 suspected cases of tuberculosis and their contacts receive attention from tuberculosis specialists; 98,000 persons are treated at the venereal clinics. There are over 180,000 hospital beds, excluding those in mental hospitals and more than twice this number are provided by voluntary organisations. I leave you to compare these figures with those which can be gathered in a similar area of our country.

Again to quote Dr. Jameson's figures for England and Wales, more than £26 millions is spent annually on medical services by local authorities and over £31 millions on environmental sanitation, including housing.

What is the reason for this difference between the Public Health progress in England and India? In the opinion of General Megaw, who was the Director of the Calcutta School of Tropical Medicine and later D. G., I. M. S., in England sanitation has achieved its victories not merely by the preventive measures taken against disease but also because the public co-operated, and an improvement in the economic standards of living was taking place at the same time as the work of disease prevention, but in India the progress has been poor and this is due to "the new wine of scientific sanitation having been poured into old bottles of antiquated customs."

But General Megaw's reason by implication condemns the Indian people as a non-co-operating lot. But it is, however, gratifying to see his statement flatly contradicted by no less an authority than Col. W. G. King, the best part of whose service has been spent in laying the sound foundations of Public Health in this Presidency, which brought him into intimate contact with the people, that "the average educated Indian is not only capable of grasping the benefit of but of receiving, with very much gratitude, health education by practical demonstration of sanitary works of the community."

It cannot be doubted that education is the most desirable ally of sanitation, though it might be contended, not without some reason, that the educational policy has not pursued profitable paths and has, of late, been ploughing barren sands. This is realised by the Government and the people and has awakened them to a consciousness that all is not well with education in this country and that it needs a re-orientation and reform in all its branches.

A short history of Public Health Policy in India

Col. King had rightly remarked that Politics cannot disregard Political Economy, nor Political Economy Sanitation—in its broadest sense—as applicable to man and beast and that, if sanitation be an integral part of politics, equally must laws be evolved for restraint of the selfish instincts of the individuals, which endanger the health of their neighbours, and their corollary multiples of communities and nations.

From the early days of the East India Company its administrative officers were provided with sanitary

advisers. In 1859 a Royal Commission was appointed to enquire into the heavy mortality among the officers and ranks of the British and Indian troops. The commission issued the report in 1863. In 1864 Sanitary Commissions were appointed for Madras, Bengal and Bombay. The Sanitary Commissioners of Madras and Bengal recommended the organisation of the Public Health Service. This was pigeon-holed with the remark that the funds must be provided by the Provincial Governments. The plea that education should precede sanitation was advanced. The Government considered it inadvisable to force public health on a population, that was resisting the innovation. It wanted to create goodwill by curing diseases and widening education to prepare, as it were, the ground on which the seeds of Public Health may be sown later.

In 1869 the appointment of the Sanitary Commissioner was transferred from the Military to the Civil Medical Department. A junior Army Medical Officer was considered enough and was subordinated to the Surgeon-General. Sometime later plague broke out and the Plague Commission, which was constituted to enquire into this disease, recommended a status of equality to the Sanitary Commissioner with that of the Surgeon-General, the Head of Curative Medicine. Subsequently, within a few years the Sanitary Commissioner was again thrust to a subordinate rank to the Surgeon-General. Later, his name was changed from that of the Sanitary Commissioner to that of Director of Public Health.

In 1889 the Madras University undertook to institute the qualification of Licentiate in Sanitary Science, which was later changed to Bachelor of Sanitary Science, a qualification equivalent to that of D.P.H. in Great Britain. Other Indian Universities followed the example of the Madras University. Civil Assistant Surgeons qualified themselves for degrees in Sanitary Science. Sanitary Inspectors were trained. At an earlier date Col. King recommended the utilisation of qualified men for Public Health work in Municipalities and District Boards. In those days the District Medical Officer was also the Sanitary Officer of the district. I have had the honour of being the District Medical and Sanitary Officer of one of the then biggest districts in the Presidency which was sometime ago bifurcated into two districts.

I can testify from experience that the District Medical and Sanitary Officer could not have carried out satisfactorily either his medical or his sanitary duties from the modern public-health point of view. He clamoured for separate assistance for the discharge of sanitary duties. Civil Assistant Surgeons were appointed as Sanitary Assistants. The Surgeon-General wanted that these men should be appointed by him and subject to his control and discipline. The District Board protested that he who paid the piper should have the right to call for the tune. The Sanitary Commissioner was a mere passive witness in this ugly squabble for power.

Later, the nucleus for a Public Health Service was laid; almost every Municipality and every District Board were compelled to have a medical

officer with Public Health qualification to look after the Public Health of the local bodies concerned. These District Health Officers and Municipal Health Officers were placed under the Director of Public Health, who was also given a few assistants of the rank of Assistant Directors of Public Health. In this presidency our thanks are due to Col. Russell for the inauguration of the present well-planned scheme of public health service. Even here Madras took the lead.

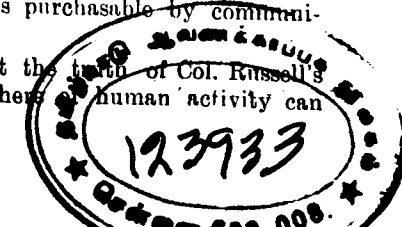
It should, however, be acknowledged that public health appointments under Municipal and Local Boards were at the beginning not attractive. Even with additional encouragement, these appointments are not eagerly sought; but they are taken up, because better openings for service are not available for qualified men. The report of the Ministry of Local Self-Government for 1921 contains the following statements:—"The reluctance of professional men to accept service under Municipal Council is a menace to the future of sanitation of this Presidency. . . . Even men qualified as sanitary inspectors avoid service under local bodies, if they can get other employment." Things have improved since, but the improvement is due to unemployment and the overcrowding of the professions.

Importance of Preventive Medicine

We must reckon with the fact that 'Preventive Medicine' has come to occupy a higher place than that of 'Bottle Medicine'. In the Dictionary, Medicine is defined as "the art of curing, preventing and alleviating disease". This is due to a general realisation that the physician should be equally interested in both Curative and Preventive Medicine. The efforts of such eminent persons as Dr. Jameson, Col. King, General Megaw, Col. Russell and others should be augmented by the other members of the services, the profession and from among the public, interested in Public Health work, by the insistence on the fact that the most essential factor in the development of Public Health in India is the question of cost. To the question of Sir William Osler why malaria should not be stamped out of India as it was done in Panama, Sir Leonard Rogers is reported to have pointed out the impossibility of such an improvement, because in most Municipalities in India the whole of the work—teaching, hospitals, schools, roads, sanitation—had to be paid for out of an income of 2 or 3 shillings per head of the population.

A healthy nation is largely a question of money. Health has to be purchased with money. Like all other good things it cannot be had for the mere asking. A nation must be healthy to become wealthy and it is only wealthy nations that have attained to high standards of health. Judicious expenditure of wealth can create health. The absence of health inevitably leads to absence of wealth of the nation as of the individual. Every one should remember that the "first wealth is health", and that "within human limits health is purchasable by communities."

I earnestly hope that the health of Col. Russell's statement, that in no sphere of human activity can



richer dividends be earned than by judicious investment in the preservation and promotion of the health of the people, will be fully understood.

Cruel catastrophies, harrowing horrors of famines and highly sponsored appeals for the treatment of the sick have proved successful in arousing public sympathy and in the collection of the necessary funds. But the voice of the appeal of Preventive Medicine seems to be a cry in the wilderness. Philanthropists have come forward to endow beds or build wards or dispensaries but I am yet to hear of a single endowment by any one in this country for an Institute of Preventive Medicine, the services of which are non-spectacular. Preventive Medicine, though despised to-day in India, will be enthroned in its proper place to-morrow. Our philanthropists will, I hope, bear in their mind the saying of Sydenham that the effect, even the slightest reduction in the incidence of sickness, suffering and death, must always be a matter of greater felicity than the riches of a Tantalus or a Cræsus.

Lt. Col. H. E. Shortt, Director of the King Institute, Guindy, in his address to the Rotarians in Madras last August, is reported to have suggested that the funds provided for higher education, i.e., the amount expended on Universities, may be diverted to the promotion of the physical well-being of the people, by which he means endowments for Medical Research. I do not consider that this suggestion will find favour. There is no doubt about the need for the re-orientation of University Education with the object of introducing useful reforms in it. But the mere diversion of a part of the amount now allotted to the Universities to the Public Health Department will only starve both the Universities and the Health Department. I, however, agree with him that the University Education, which is mostly of an academic nature, is being poured in many cases into bodies physically ill equipped. The poor physique of our University students has been repeatedly pointed out in the reports of the Medical Inspections of University students in different parts of India.

I have been myself an eye witness to the haggard look, bent back, sunken eyes, emaciated frame and other signs of poor physique of the graduates, who come up in the variegated colours of their academic robes in an impressive procession to bow before the Chancellor and take their degrees. The convocation function, which ought to leave a happy buoyant feeling, has often given me a sense of depression, not only due to the doubts as to the capacity of the graduates to keep their heads above water in the sea of unemployment, into which they are driven from the portals of this University, but also to the melancholy prognosis, that the large majority of them are physically unfit to weather the cruel storms of many diseases, which abound in their neighbourhood.

Nutrition

During recent years a remarkable advance has been made in the Science of Nutrition which has resulted in a re-orientation of Public Health problems. Public Health work is not merely the control of diseases from spreading and the defending of people against attacks of disease but it aims also to create

a maximum physical well-being. Nutrition plays a very important part in increasing the stamina and vitality of the nation.

This science of nutrition is slowly changing the dietetic habits of the people. In the industrial wealthy countries the old bulky predominantly starchy diets are giving place to lighter but balanced diets, richer in animal proteins. We find an increased consumption of milk, butter, cheese and other dairy products, sugar, eggs, fruits and green vegetables.

Increasing attention is being paid to food production and distribution. People are realising that the world's food production can be increased many times without increasing the area of cultivation, if only they make use of the available scientific knowledge to the fullest extent. Have not engineering and biological sciences ridden certain parts of the world of malaria and other deadly diseases, which prevented men from going there and cultivating the soil and turned dreary deserts and sickly swamps into fertile fields and green pastures and vegetable and fruit gardens?

There are those who deplore a Nation's adopting a policy of economic nationalism and aiming at the ideal of economic self-sufficiency by the barriers of customs and high tariffs against the import of food-stuffs. But the fact remains that this spirit of economic nationalism is rapidly spreading.

Poor nutrition lowers vitality and leads to disease and disease in turn to the poverty of the people. Higher wages need not necessarily lead to better nutrition. Popular education in the science of nutrition, however elementary it may be, is very necessary for the well-being of the people. The attention paid to nutrition, even in the curriculum of medical studies, is inadequate at present. It is very satisfactory to note that the small book on the 'Elements of Nutrition' by Col. McCarrison is being more widely read, by being translated into the vernaculars of this Presidency. There is also a Department of Nutrition in the All-India Institute of Hygiene and Public Health, Calcutta. Post-graduate students who take a course in Public Health will in future study the science of nutrition. The nutrition laboratory at Coonoor is serving a very useful purpose in undertaking research in nutrition and is under the management of the Indian Research Fund Association.

It is hardly necessary for me to say that the first help to the Nutrition Laboratory, Coonoor, came from this part of the country, from the Rajahsahib of Parlakimedi who, by a princely endowment of a lakh of rupees, has given a great impetus to research in nutrition, thereby drawing the attention of other Zamindars, Rajahs and Maharajahs to the importance of this new science of nutrition and giving a lead to them to help this Public Health cause.

In Japan and Soviet Russia, Nutrition Institutes are connected with the State Departments of Public Health and with the Universities. The American Dietetic Association has a large body of nearly 8,000 members. It is recommended that a chair for Dietetics should be created in each of the

medical schools and colleges. It would be to the advantage of both research work in nutrition and the teaching of the subject to medical students and others, interested in the science, and to the specialists attached to the nutrition laboratories, if the laboratories are shifted from Coonoor to Madras or to Vizagapatam. A Nutrition Institute has been recommended to be erected and endowed and if this fructifies, I hope it will not be located in a place, that is not a University centre with medical colleges and hospitals. In such a centre there is the additional advantage of an intellectual contact between the nutrition specialists and other scientists, whose collaboration would be of immense value and whose work may be correlated with the rest of the Science of Public Health.

The value of teaching elementary principles of nutrition and simple rules in regard to diet is recognised in other countries. In Boston and other parts of America there are Nutrition Classes. There are five Nutrition Clinics in London. The Department of Agriculture in U. S. A. disseminates information on nutrition and rational diet among the people. The importance of publicity and propaganda is well recognised.

Dr. Aykroyd, the Director of the Nutrition Laboratories, Coonoor, has drawn our attention to the urgent need in this country for a detailed enquiry into the dietetic habits of the people in the different provinces, and into the prevalence of food deficiency diseases. I hope the necessary financial aid for this investigation will be forthcoming and the enquiry commenced very soon.

The League of Nations Health Organization has in view the constitution of a permanent Commission to study the problems of nutrition in the proposed International Institute of Nutrition. The general problem of nutrition to-day is the need for the harmonising of Economic and Public Health Development. I believe the different aspects of the problem can be better tackled by shifting the Nutrition Laboratories from Coonoor to Madras.

The report of the Director of the I. L. O. at the 19th Session of the International Labour Conference in June last has drawn attention to the relationship between adequate consumption and a proper standard of healthy living. The fact that large masses of people are at present underfed or malfed is not open to dispute. The foundation of a reasonable existence should be that amount of wages which would enable the worker to obtain a minimum of healthy diet for himself and his family and a healthy shelter for them. The report also states: "No one can doubt that there is immense scope—nay urgent need—for the increasing consumption of most kinds of fruits for almost every country in the world." Increase in consumption would go to solve the agricultural problem and also to improve health, so as to reduce the budget expenditure of Government on medical aid. The increased efficiency of the population would increase the production of wealth and stabilise political conditions and solve to a great extent the difficult problems of unemployment.

Especially in our country poverty is the most important factor which has to be considered in the solution of the food problems. We cannot raise the purchasing capacity of the people without exploiting the internal market of the country more intensively and also the external market, if possible, thereby effecting a marked rise in the level of agricultural prices. Countries which have no natural conditions for the production of all their food requirements cannot aim at the ideal of self-sufficiency in the matter of foodstuffs. But it is generally held and supported by authoritative opinion that India which has an infinite variety of soil, climate and other natural resources, need hardly go beyond her boundaries to produce a sufficiency of food-stuffs, to give an adequate and well-balanced dietary to the whole nation.

Health and Hygiene

"Neither Æsculapius nor his daughter, Hygeia, is represented as in tears, with the habiliments of mourning; but instead Æsculapius is armed with serpents, the symbol of wisdom and convalescence; and Hygeia is bestowing warmth and succor—beautiful symbols of Health and Preventive Medicine" (Dr. D. W. Cathell, M.D.).

"With health everything is a source of pleasure; without it, nothing else, whatever it may be, is enjoyable. It follows that the greatest of follies is to sacrifice health for any other kind of happiness, whatever it may be, for gain, advancement, learning, or fame, let alone, then, for fleeting sensual pleasures." (Schopenhauer).

Lost stamina and lost health make for poverty. Political power, economic progress, educational advancement, scientific research, industrial expansion—in fact, even good habits and noble aspirations, cannot be got by mere chance. Hygiene plays an essential part in the rearing and maintaining of a healthy Nation.

All religions tell us that it is a sin to foul the mind or contaminate the soul. Does it not also teach us that it is also a sin to defile the body?

What is the use of holding Health Exhibitions which have degenerated into an annual *tamasha*, whose effect is of ephemeral nature. The Gospel of Health has to be preached in a sustained manner every day in the year and a Health Museum should be opened, at least one in every district, to which a permanent staff should be attached for publicity and propaganda. This 'Temple of Hygeia' should be so built as to attract the people of the district to go on a pilgrimage for worship to be blessed with the knowledge of how to secure and keep health for themselves.

There is such a thing as Physical Morality. It is not only a duty to one's own self but also to his neighbours, the community, and the Nation and also to other Nations and future generations.

Democritus said "If the body and soul were to sue each other for damages, it would be a question, whether the landlord or the guest were more to blame."

'Dynamics of Health' is the Science of Health. Health is never static. It is a constantly changing dynamic force. Good health gives vitality, vigour and vim. A realisation, that health is a dynamic progressive force and that vitality is the inherent, latent doctor in us, which resists disease or makes us get well quick, should engender in us the desire to foster health and to study Hygiene, which teaches us how to get and keep health.

Man's transgressions of the Laws of Health are not forgiven. Diseases have been compared to thieves and murderers, and the Preventive Medicine of the present day recognises that it is far more sensible to employ Scotland Yard Detectives to track the Criminals of Disease than to employ an Army of Doctors for the cure of the same. "Prevention is better than cure" has become well-worn by repetition. But it is worth repeating, until such knowledge leads to action. There is only one inebriety, which, instead of being censured can be commended and that is the intoxication with the 'Joys of Health'.

To the question which may reasonably be put to me, why I should talk to you about 'Health' on the present occasion, which was not expected to be used for a health talk or for propagandist purposes of the Health League, my reply is that it is not realised how all this propaganda is wasted, so long as Hygiene does not form an essential part of the school curriculum in all its stages. Graded courses in Hygiene, which is after all the most important subject from the personal and community points of view of healthy living, should be prescribed in all the classes, right up at least to the Matriculation standard.

"*Mens sana in corpore sano.*" "A healthy mind in a healthy body" is a trite saying and a truism admitted by psychologists and psychiatrists. A healthy body is necessary, if the mind should be healthy. Unless the mind is healthy, good habits and good character cannot be formed. Persons without good character and conduct in life are a drag on and a danger to Society. If we realise that the essential virtues can be fostered only by a healthy mind working in a healthy body, we will not lose any time to make Hygiene (including Mental Hygiene) a compulsory subject of the school and college curriculum. What availeth man, if he in the process of gaining wealth loses health of body, mind and soul?

I hope that Your Excellency's observation, during the recent Prize Distribution Function of the Government College at Mangalore, would have obtained sufficient publicity already. But it is worth repeating. "Education does not merely mean stuffing one's brain with facts; it means that, in order to be able to use those facts, one must keep healthy, so that he may be able to make use in future life all the knowledge and learning that he may get, when he was at school or college". I wish that the above observation of Your Excellency is put up in bold blazoned letters as the motto in every Educational Institution.

Sane Outlook on Life—Mental Hygiene

In comparison with other progressive countries, the position of India, from the public health point of view, is anything but satisfactory. Though the economic condition of the people has much to do with their state of health, the problem of tackling the deplorable state of health conditions cannot be solved by looking at it purely from the economic stand-point. It should be remembered that even in the western countries, where the economic position of common man is infinitely better than that which obtains in India, there is still plenty of misery of diverse kinds. But it should not, however, be lost sight of that a certain level of comfort is absolutely essential for healthful living.

It is not the multiplication of worldly goods and our wants which make for human happiness but human happiness depends to a considerable extent on a sane outlook on life, which can be brought about by what Everett Dean Martin calls "a liberal education". The creation and growth of a sane outlook on life is attempted in other countries which have scientifically planned their educational progress through the medium of Mental Hygiene clinics and by the inclusion of Mental Hygiene as an important subject of study for a liberal education.

The three most important general objectives in education to-day are (1) the imparting of knowledge, (2) formation of good habits, and (3) teaching of wholesome attitudes to human environmental influences by the training of the primary human emotions. From the beginning the educational organisations have pursued the first objective only. The study of Psychology and its influence on education have resulted in a greater realisation of late of the importance of the formation of habits from the very early stages of a child education. A man might have mastered Ethics and yet lead an immoral life or be a Philosopher, whose Philosophy fails him in the hour of trial, or be a medical man who knows and preaches to others all the rules of good health but fails to make use of that knowledge with regard to his own health. There are many people who do not put the knowledge they have gained into the everyday life of the practical world. Knowledge by itself is useless, unless put into practice. It is being increasingly realised that formation of the health habits is more important than mere knowledge about health.

It is a sad commentary on our present day education that it does not aim at teaching the student how to live and in what the real happiness of life lies. It is Psychology again that has drawn our attention to the significance of the part played by the various human emotions in making living happy and successful. The training of the emotions to create wholesome attitudes and reactions to outside influences should be the third educational objective. Wholesome emotions are attempted to be strengthened and undesirable emotions weeded out in Mental Hygiene training.

The preaching of the 'Gospel of Mental Health' is more necessary than the propaganda for compulsory physical education. It is no doubt true that body

and mind react on each other but there is no use of a giant frame if it is to harbour a weak mind; far better a frail frame, which enshrines a strong and well-developed healthy mind. Emotional self-control, the cultivation of normal relations with one's neighbours and a knowledge of the real wholesome 'Philosophy of Life' are a few of the many benefits, which can be derived by a comprehensive course in Mental Hygiene.

Prof. William McDougall has described that the heart of the human personality, its "cylinders", are the primary emotions as fear, anger, etc. If these are removed, we should be, mentally, like springless clocks or fireless steam engines. Mental Hygiene will help the individual to self-discipline and create in him the desire to subordinate the self and merge it in the larger interests of the "bigger self" i.e., the Community. In that sense is it not true that a man has to lose himself in order that he may find himself? If we search deeply, we will find that true happiness can result only from a well-integrated personality, which is able to respond successfully to the varying stimuli of painful or pleasurable nature, which impinge on the personality in daily life. The necessity, therefore, for self-discipline and for the development of certain higher and more ennobling interests beyond the daily struggle of "getting and spending" needs no advocacy.

It is the study of Philosophy that can enrich the soul and enlarge the mind and lead us to the acquisition of higher values in life. Philosophy is an important subject of study for a saner and healthier outlook on life. No person can be considered to have had a liberal education, if Philosophy did not form part of his studies. Philosophy should supplement Science (used in the ordinary sense) and Science should pervade Philosophy. It is in such happy embrace that real liberal education is born.

George Borrow (Lovengro) can so derive happiness from the blue sky and the changing effects of the seasons that he asks himself "Is it not worthwhile to live?". On the other hand to the vast majority of men Wordsworth's words are too true—"The world is too much with us, getting and spending. We may waste our powers. Little we see in nature that is ours."

SIXTH PROVINCIAL ASSAM MEDICAL LICENTIATES' CONFERENCE*

Fair Field And No Favour

Welcoming the delegates and visitors to the 6th Provincial Conference of The Assam Medical Licentiates' Association, held at Dibrugarh on 26-10-35 Dr. Mahananda Barooa, Chairman of the Reception Committee, in the course of his speech said:—

We have assembled here not only to interchange our ideas but also to devise ways and means for the uplift of our class and for the redress of their numerous grievances. Let us rally round the banner of the Mother Association, gain more members and

*vide I.M.J. Vol. XXIX P. 645 for other details.

open numerous branches. In spite of our being called *the back-bone of the medical profession* by the highest authority as well as by the meanest citizen, our cry has been in the wilderness. Is it because that we are ignorant of the ways of ventilating our legitimate grievances? No. It is doubtless due to the fact that we are pressed hard within the water tight compartments of medical service which has no analogy of its kind anywhere in the world. In England, even a licentiate of the Society of Apothecaries can compete for the I.M.S., but in India things are quite different. We want fair field and no favours.

The Indian Medical Council Act of 1933

The passing of this Act has greatly agitated the minds of the Licentiates. Although the original idea of an All-India Medical Council emanated from a licentiate and introduced by him in the Legislative Assembly, the fate has decreed otherwise and we are left in the dark shade of neglect. It has been passed in the teeth of strong opposition and vehement protests. As *The Indian Medical Journal* pertinently observed: "The name All-India Medical Council is a misnomer. The bulk of the medical profession is excluded. Besides, it has a very few of the normal functions of a real medical council. It is the result of adroit and audacious trespass of the General Medical Council of Great Britain into our precinct. It is not the result of our willing endeavour or acceptance Without the licentiates, there can be no All-India Medical Council in the true sense of the term." And it has truly characterised it as a *mockery and a snare*. To make this *settled fact* an *unsettled fact*, let the licentiates work ceaselessly and constitutionally. I take this opportunity to appeal specially to the Members of the Assembly and the Council of State to exert their influence in getting the Act so amended as to include the licentiates in its ambit and make it acceptable to all concerned.

Licentiates in Government Service

The present retrenched scale of pay of Rs. 70-5-150 with the selection grade of Rs. 175 (formerly 75-5-175, selection grade Rs. 200) is utterly inadequate to meet the needs of their family, the education of their children and their own desire to improve their medical knowledge. Those who are in charge of Police and Jail Hospitals get no allowances although their duties are hard—a nominal allowance at the end of the year and that on the recommendation of their officer is the only sign of commiseration! The hostel allowances in the Sub-divisional headquarters are not allowed to be drawn by the S.A.S. The T. A. of at least those S.A.S. who are drawing Rs. 150 and more may be on the scale of second class officers, just as the Postal Inspectors drawing Rs. 100 and more are allowed to draw. While three civil surgencies are reserved for the Military Assistant Surgeons whose qualifications are no better than the S.A.S., yet the latter are allotted but two Assistant Surgencies and out of these two, only one is actually enjoyed. Then, there is the bond of indenture for 10 years which the S. A. S. has to execute after confirmation. What on earth is res-

possible for singling out the S.A.S. for such an indenture, no body knows; and it is inexplicable in view of the fact that there are no dearth of candidates at present. The S.A. S's. quarters in the outlying stations require improvement if they are to be habitable and comfortable. Even this apology of living abode is denied to the supernumeraries and the S. A. S. in P. H. Department get a pittance of Rs. 10 as house allowance. Either the house allowance has to be increased or the actual expenses should be paid. Most of the maffusil dispensaries are without microscope. A small equipped laboratory, a few important books of reference and journals are indispensable if the S.A.Ss. are to treat cases satisfactorily and scientifically. Its stock of drugs and surgical equipment need also to be augmented. These grievances and disabilities, I hope, will be duly redressed by the government.

Licentiatees in Public Health Department

Their lot is no better than the former. They have got to do special duties and surveying as well. They have to pass their days in out of the way places in great difficulty and distress. They have to remain in the temporary cadre for an indefinite period of time. Even when made permanent, their past services are not counted for pension. They are neither allowed practice to supplement their pay. The conditions of service are very hard. It is but right that the authorities should consider all these and allay the discontent.

Licentiatees in Tea Garden Service

They are also equally smarting under a load of grievances as regards their pay, prospects, etc. There is no fixed scale of pay with annual increment. There is no security of tenure and they can be dispensed with at any moment. As a result of the efforts of our Association, the designation of *Assistant Medical Officer* has been given to them; but in many cases this is not observed in practice. The term *Native Doctor* is still officially used, in spite of the circular issued by the Assam Branch, Indian Tea Association. The tea-estates still employ unqualified and unregistered practitioners, although the Medical Council of Assam had held as long ago as 17th October, 1932, that it will be ethically wrong and punishable by removal if the registered practitioners supervise the work of the unregistered practitioners under them. Unless the employers are prevented by the Government, this state of affairs has little chance of improvement. Recently, the pay of a number of Assistant Medical Officers has been reduced at a stroke by Rs. 40 or 50 or even more in some cases, owing to the depression in tea trade, without even taking their past services into consideration. Many of our brother licentiatees have rightly protested against this heartless retrenchment and resigned. I condemn this wholesale retrenchment based neither on justice nor prudence with all the emphasis at my command. The tea garden authorities should be asked (1) to introduce or extend, as the case may be, Provident Fund System,

(2) to grant at least one month's privilege leave a year, (3) to employ qualified compounders in every tea estate dispensary, (4) to grant study leave, (5) to cease employing unqualified practitioners.

Licentiatees in Local Board Service

They have no designation worth its name. The designation of *Medical Officer* will, I think, be appropriate. The courtesy title of *Dr.* ought to be used in addressing them, as in Government Service. There should also be uniform system of service throughout the Province. The following other grievances demand immediate consideration and redress: (1) no differences in pay and prospects should be made between Medical Graduates and Licentiatees when they are holding the same post, (2) present system of multifarious duties without extra-allowances should be given up, (3) proper post-graduate training should be arranged for; the newly introduced "8 weeks refresher course" should be abolished, (4) the Assam Local Self-Government Manual should be amended in such a way that all medical matters concerning the Local Board may be entrusted solely to the medical authorities and that appointments may be made by a Board of medical men and not by votes in the Board Meetings, (5) they should be given at least the existing Government scale of pay, (6) the increasing practice of employing medical graduates in preference to licentiatees should cease.

I sincerely hope that good sense will prevail and that the authorities concerned will do the needful without further loss of time.

Licentiatees in R. S. N. Co's. Service

They are held responsible for the company's cash instead of medicines! They have to attend to very little professional work! What a travesty! No free quarters, insufficient leave reserve, very low pay and prospects, no opportunity for private practice—these are legitimate grievances which the company ought to redress forthwith.

Study Leave

The so called refresher course at Dibrugarh, Gauhati and Sylhet should be abandoned. It is a mockery of a post-graduate course. There is no reason why the S.A.Ss. should not be allowed study leave to enable them to proceed to foreign countries for higher medical education, as it is in vogue at Madras. Unfortunately, they are also not allowed to join even the D.T.M. course on the ground that it is an University degree and that therefore, no licentiatees are eligible for it. The old post-graduate training at Calcutta should be re-introduced as early as possible.

The Five Years' Course

The B. W. Medical School, Dibrugarh, is the only institution of the kind in this Province and we have been praying and petitioning so long to increase the course from 4 to 5 years. This will not involve much expenditure and by a suitable modification of the staff this can be effected satisfactorily.

Let us be up and doing

In spite of these numerous grievances and disabilities, let us not be disheartened. In the immortal words of the poet:

Let us be up and doing
With a heart for any fate
Still achieving and still pursuing
Learn to labour and to wait.

NOTES ON THE MEDICAL SCHOOLS OF INDIA (1935),

MAJOR GENERAL SPRAWSON,

The Director-General of Indian Medical Service.

(That is the title of a booklet recently published by General Sprawson for the information and guidance of the teachers and the Superintendents of the Medical Schools. His remarks and observations are well conceived and expressed. His suggestion for an All-India Meeting of representatives of the various schools and their controlling bodies is worth consideration and early action. In publishing this book-let, he has done a distinct service to Medical School Education in this country. It reveals his anxiety over the existing state of Medical School Education and shows his far-sightedness as a medical administrator. We, therefore, make no apology for publishing this in extenso and commend it to the serious attention of our readers, most of whom are directly interested in the subject. Editor I.M.J.)

In the course of journeys throughout the greater part of India, entailed upon me by service in different provinces and by my present appointment, I have taken the opportunity to visit many medical schools where education of the licentiate medical standard is given. There cannot be many medical officers whose duty will have led them to visit many of these medical schools in widely distant provinces and whose training can qualify them profitably to note on their observations: so it has occurred to me that remarks upon the medical schools of India as a whole considered with information about each school should be of aid to the teachers and superintendents of these schools and to the Governments and other bodies who control them. Indeed it seems to me that collection of such information is a necessary prelude to a general improvement in the standard of licentiate medical education.

There are 28 medical schools in India, including one in Burma: they are under provincial or other local control with but little centralising influence and the staff of one school have no direct knowledge of what is being done in distant schools outside their own province. No one can have visited many of these schools without being struck by the difference in standard amongst them, by the variations in buildings, equipment and staff. There is much more difference between the best and the worst medical school than there is between a good medical school and a medical college affiliated to a University. The reason for this is not difficult to see. There have been stronger centralising and equalising influences at work among Universities and Medical Colleges than among Medical Schools. For one thing the

medical colleges have of recent years had more attention paid to them and by reason of their past association with the General Medical Council of Great Britain a minimum standard for higher medical education has been arrived at, a standard that it will be the work of the Medical Council of India to sustain and improve. The standard of education in medical schools is under the eye of provincial medical councils, who consider local needs; but these schools are without any central co-ordination. Whether such co-ordination is necessary or not, it is advisable that the various schools should have some knowledge of what the schools in other provinces are doing and some means of comparison. It has been suggested that a single inspecting body should visit the schools and report on them. Since these 28 schools are placed all over India and Burma, such inspection would obviously be expensive and lengthy and is outside present consideration. But meanwhile something can be done and to this end information has been collected on some essential points in medical education at the schools and some of that information is given here. Certain details have been obtained from the annual reports of the medical schools and questions on other practical points have been sent to the school authorities to enable this information to be enlarged. Here I take the opportunity of thanking those authorities, whether of Government or private schools, for sending me their reports and the answers to my questions. The parts of this information that lend themselves to tabulation are given in a statement at the end of these remarks and some explanatory notes and comments of my own precede the statement.

I wish it clearly understood that there is no criticism here of any individual school. From what I have seen of the schools I believe that they are all doing their best with the, sometimes, poor means, financial or otherwise, at their disposal, and much credit is due to their superintendents and their staffs for having done as much as they have. But the staffs of these schools will be the first to admit that there is room for improvement. When they study the tabulated statement here they will identify their own school and see what other schools are doing and they may be able thereby to induce changes in certain items in their own schools. If so, that will be all to the good: and they can be assured that the figures relative to their own school are confidential. To ensure that being so I have designated each of the schools in the statement by a letter of the English or Greek alphabet. The superintendent of a particular school can identify his own place from the figures published in the statement, with which he has furnished me; but no one else is likely to recognise his school from these figures.

It is not suggested that the figures given here can show a complete picture of the school's condition. Many questions, pertinent to the efficient instruction of medical students, have not been asked. For instance no enquiry has been made whether the hospital attached to the school possesses a radiological section, or has a proper staff of nurses or a Nurses Training School. All these, and other things, are

items which most of us regard as necessary for the complete training of medical students; but we know that several of these hospitals do not possess these things, and this first enquiry is only into the points we regarded as more essential.

In the comparative statement we have not tabulated replies to all the enquiries made, though the replies on other points are also interesting. Enquiry was made as to the cost to the educating authority per student per annum after laying down for the sake of uniformity certain principles on which this calculation should be made. The average cost seems to be about Rs. 300 per annum per student, though schools for women only usually cost more, probably because of the fewer number of students in comparison with the number of staffs to be paid. There is, however, extraordinary variation in the replies received. Thus in School J the cost is only Rs. 60 per annum and 80 per cent of the students are private, and in School F the cost is Rs. 62 per annum and all are private; while in School N, a women's school, the cost is Rs. 960 per annum and none are private, and in School V, where the sexes are mixed, the cost is Rs. 952 for a stipendiary and Rs. 564 for a private student: presumably reckoning without the student's fees the cost would be Rs. 952 for every student. This difference in cost per student is apparently reflected in the standard of instruction because School N certainly compares well with others.

Question was asked also on the preliminary standard of education before entry to the medical course. In all provinces the Matriculation or School Leaving Certificate is the standard usually taken, though one province is obtaining an appreciable number of Intermediate-passed entrants. Another province accepts women students at a lower entrance standard. I believe this to be a mistaken policy. It can be defended by representing the need for women doctors and the lack of applicants unless the entrance doors are widened; but it is doubtful if a woman who has not attained Matriculation standard can take with profit a medical course and at any rate the time has now come when a higher demand should be made on women entrants. We should have women doctors of satisfactory standard or not at all. This leads naturally to the much bigger question whether we should try to educate a large number student in an inferior manner or fewer students in a comparatively satisfactory manner: whether we should have many inferior schools or a few satisfactory ones. Because we cannot have it both ways. There are only a few places in each province with hospitals large enough to provide clinical material for a medical school. Further, the cost of the school and hospital buildings, and the cost of the equipment necessary to instruct students properly both in school and hospital are such that no province would be prepared to provide a correct standard of buildings and equipment for more than one or two schools. Perhaps more important still is the matter of the teaching staff. Except in the two largest cities where the services of a well-qualified staff can usually be obtained on a

voluntary basis, there is not yet in any province a sufficiency of medical men, highly qualified enough to be considered of medical education standard, to staff more than one or two medical schools in addition to the medical colleges. If, therefore, we multiply medical schools, they must, at any rate for the present, be inferior in several respects. It is a matter of policy to be decided therefore whether we should have several inferior or a few satisfactory schools and different provinces have followed different lines, while the same province has apparently changed its policy with the times. The Madras Presidency formerly had 6 or 7 medical schools, but now has only 3, two Government and one private. The Bengal Presidency has 9 schools, 6 Government and three private, and some of them of recent establishment. Which is the correct policy? It may be argued that many cheap doctors are wanted for the villages, to replace inferior practitioners or supply some sort of medical aid where none exists; that it is no good sending expensive doctors there because the people cannot pay them, that it is better to send out registered medical men with some sort of qualification, however inferior, than to leave the rural population to ignorant and unqualified practitioners. It has even been said we should multiply compounders and send them to the villages since doctors will not go and cannot get a living. This question was considered at length in Madras in 1929 when a Medical Education Committee was established that decided that the Presidency did not so much need more doctors as better doctors. Experience seems to show that the average medical man, if not properly educated, when he is let loose on the world to practise his profession, himself tends to degenerate and to become hardly better than the man he is intended to replace. It is only the exceptional man who, without a satisfactory education, can make good and educate himself until he becomes a really good doctor. If that is so, it certainly seems better to have a few satisfactory schools rather than several inferior ones and that seems to be the generally accepted policy, because the average number of medical schools per province or State area works out to about 2½.

One method that has been used in the past to economise equipment and teaching staff is to have a medical school in the same building as the medical college and using the same hospital. This is not satisfactory: both college and school are likely to suffer, and the experience of the past has led generally to the abandonment of this plan. There is only one place where this is still done.

Before examining the tabulated statement we may consider what standard in certain respects we should try to attain. From what has been said above, it will be expected that most of the medical schools will be overcrowded with students, and indeed that is so, except in the case of a few schools for women. This is certainly regrettable, because overcrowding of students in proportion to laboratory accommodation and equipment, amount of clinical material, and number of teaching staff, are the most potent

cause of inefficiency of education. The province with the largest number of schools has them even more overcrowded than the other provinces.

Here I propound seven standard rules to which I consider a school should try to attain. All these rules are concerned with the proportion of patients and certain equipment to the number of students. There are doubtless other rules of proportion: I am suggesting only a few that experience has taught me are important. If anyone thinks that these standard rules tend unduly to restrict the number of students I can only give it as my experience that lower numbers tend to better education.

Standard Rules.

Let x = Total number of students in the School.
and y = Number of students admitted annually.

Where the instruction is a 4-year course it will generally be found that $x = 4\frac{1}{2}y$, and in a 5-year course that $x = 5\frac{1}{2}y$ or a little more. This allows for failures in examination and for some students abandoning the course. If these numbers are not approximately in this proportion, and a study of the tabulated statement will show that they are often not so, then there must be some other factor dislocating the proportion, such as an unusual admission number in one or more years, or an exceptional number of students abandoning a medical career.

- (i) The sanctioned number of beds in the hospital or hospitals, including special departments, should be not less than $5\frac{1}{2}$ times y .
- (ii) The number of beds in the hospital should be not less than x .
- (iii) The daily average of in-patients should be not less than 5 times y .
- (iv) The daily average of in-patients should be not less than x .
- (v) The average annual number of confinements available for teaching students should be not less than 10 times y .
- (vi) The numbers of microscopes available for teaching physiology should be not less than $4/3y$.
- (vii) The number of microscopes available for teaching pathology should be not less than $5/4y$.

I will not stop to explain why I have fixed on these arbitrary numbers except to say they are the result of experience. I have fixed on the item of microscopes because they are the most expensive articles of equipment a student uses and they form a fair gauge of the general adequacy of laboratory facilities. I do not regard a microscope as fit for education. I do not regard a microscope as fit for physiology teaching unless it has 2/3 and 1/6 objectives, nor for pathology teaching unless it has 1/12 times, in addition to the other two. Deficiency of immersion in addition to the other two. Deficiency of immersion is the only item in which every medical school is below the standard of these Standard Rules and the real reason is the expense. The methods different schools employ to obviate this deficiency are numerous; the explanations given are, that the students do not require to prepare specimens themselves, but are shown those prepared by demon-

strators; that the students do their practical classes in batches; that two or more students share one microscope; that microscopes are used in common between physiology and pathology; that microscopes are borrowed from the medical college. All these methods are unsatisfactory. A microscope is an individual article of equipment that should be in the care of one student during the course of the practical classes. Although no school attains what I consider the correct standard so far as microscopes are concerned, the deficiency of some schools is deplorable. How can School H with 50 students admitted annually teach pathology with only 4 microscopes and School I with 115 admissions with only 8 pathological microscopes? School K has only 5 and School L but 2, while School U has only 3 microscopes for physiology, and Schools X and Y have but 3 and 2 respectively for pathology. These are notable deficiencies.

My figures are still more arbitrary when I come to assess the numbers and qualification of the various staffs and it should be recognised that I am but expressing a personal opinion based on the lists sent. I have taken 5 marks in each case as a maximum to represent adequacy of the numbers of staff allotted to teaching and clinical work, and to the special qualifications of the staff as a whole for the work they have to do. Obviously a paper estimate cannot be really satisfactory: and in assessing the arrangement of duties among a staff, usually inadequate in numbers, another 5 marks has been allotted. In some cases the teaching of more than one subject falls to one member of the staff, and we see such combinations as surgery and hygiene, anatomy and medical jurisprudence, gynaecology and ophthalmology, pathology and radiology. The assessment in this respect is therefore largely dependent on the number of staff available.

The percentage of marks necessary to obtain a pass varies in many schools in different examinations: so the figures here given are those of the final examinations only. Most schools have a 40 per cent, standard, and it is good to see that now there are more with a 50 per cent standard than there are with only 33 per cent.

In assessing the adequacy of the methods for appointment of examiners, the appointment of external examiners, men of recent teaching experience, to examine in conjunction with the internal teachers, is considered satisfactory; while the appointment of the school's teachers alone, or in conjunction with local practitioners, who are not teachers, is considered unsatisfactory. A member of the staff of one school represented to me that examiners at one school should be appointed from among the staff of other schools and that by so doing knowledge of the conditions in different schools would be disseminated as well as the appointment of unbiased examiners secured. This would certainly be a better method of appointment than that employed in his own school; but in most schools examiners are appointed by an Examining Board or by a Medical Faculty and the selection made is satisfactory.

Sex of Students		Total No. of Students	Maximum No. of annual admissions	Staff. Maximum marks 5 under each head				Arrangement of duties	Percentage marks necessary for pass at final examinations	Satisfactory "S" of Examiners	No. of beds in attached hospital	Daily average of in-patients	Annual number of confinements	Number of Microscopes for teaching		Length of course in years	Conformity with Standard Rules
				School		Hospital								Physiology	Pathology		
				Numbers	Qualifications	Numbers	Qualifications										
A	M & F	305	62	1	2	2	1	33	U	236	197	247	12	11	4	Deficient in all 7 rules	
B	M	276	50	2	3	3	2	50	U	216	199	98	20	18	4	" Ditto	
C	M	180	150	2	2	2	2	40	S	109	88	14	7	10	4	" " in all but Rule ii	
D	M & F	580	100	4	4	4	5	40	S	717	454	342	32	28	4	" " in all 7 rules	
E	M & F	999	100	4	4	4	4	40	S	288	174	254	18	17	4	" do	
F	M & F	434	100	8	3	3	3	40	S	150	115	125	16	8	4	" do	
G	M	199	50	1	1	2	2	40	S	146	122	41	16	8	4	" do	
H	M	222	50	3	2	2	2	40	S	88	63	54	12	4	4	" do	
I	M & F	490	15	2	2	3	3	40	S	261	259	144	48	8	4	" do	
J	M	288	150	1	1	2	2	40	S	112	96	84	14	4	4	" do	
K	M	168	50	1	1	2	2	40	S	109	85	47	19	5	4	" do	
L	M	171	55	2	2	2	2	40	S	101	85	9	18	2	4	" do	
M	M	503	66	4	5	4	4	50	S	354	889	2,722	88	28	5	" in i, ii, iv and vii	
N	F	96	20	4	4	4	5	50	S	180	175	2,109	92	9	5	" in vi only	
O	M & F	108	25	3	3	3	3	50	S	176	300	17	30	15	5	" in vi and vii only	
P	M & F	416	100	4	4	4	4	50	S	250	146	284	15	15	4	" in all 7 rules	
Q	M & F	128	86	4	2	5	3	50	S	240	175	1,068	19	32	4	" in iii, vi and vii	
R	M & F	241	44	1	2	2	2	40	S	181	187	46	29	17	4	" in all 7 rules	
S	M & F	199	93	2	2	3	3	40	U	218	181	62	12	6	4	" in iv, v, vi and vii	
T	M	309	52	3	3	4	4	40	S	296	258	243	33	25	4	" in all except i	
U	F	100	25	2	4	5	3	40 & 33	S	155	118	1,124	8	6	4	" in ii, v, vi and vii	
V	M & F	168	89	4	4	4	4	40 & 33	S	540	579	2,310	10	6	4	" in all except i	
W	M & F	318	60	2	3	3	3	40	S	800	225	808	24	30	4	" in ii, v, vi and vii only	
X	M & F	174	71	1	2	2	2	40	S	220	283	215	18	8	4	" in vi and vii only	
Y	M & F	119	36	1	2	2	2	40	S	144	120	41	12	2	4	" in all except v	
Z	M	46	18	2	2	2	2	40	S	250	225	90	7	10	4	" in all except ii and iv	
AA	M & F	238	45	2	3	3	3	40	S	250	250	628	12	10	4	" do	
BB	M & F	233	50	5	5	5	3	40	S	75	61	157	14	...	4	" in rules v, vi and vii	
																" in vi and vii only	
																" in all 7 rules	

*Since lowered to 35
18 31 from College
+S 44 from College

N.B.—Under the first column "Sex of Students" after 'Z', AA and BB have been substituted for the Greek letters mentioned in the Note

The number of labour cases available for training students varies greatly with the different schools. Some of them have special maternity hospitals attached. Schools teaching women only are as a rule abundantly provided for; but some of the schools teaching both men and women cannot be teaching much practical midwifery to either sex. The hospitals attached to Schools C and L have only 14 and 9 labour cases in the year; but in most cases the deficiency is realised and the school authorities are doing their best to remedy this.

From what has been remarked above it is evident that the two principal defects in most medical schools are overcrowding and deficiency of equipment. If the communication of the few facts here given is held to be a step in the right direction and if further advance is considered feasible, the next step in such advance should be, in my opinion, a central and so far as possible all-India meeting of representatives of the various schools and of their controlling bodies, Government and private.

BIOGRAPHY IN BRIEF

JOSEPH BENJAMIN

After the recent passing away of Dr. Sarju Pershad Tiwari of Indore, Dr. Joseph Benjamin, 73 years old to-day, is perhaps the only surviving worker of the older generation in the cause of the All-India Medical Licentiates' Association. In spite of the gliding of time and the burdens of domestic and public life, in spite of innumerable obstacles and invariable failures that faced him in his work of uplifting the medical licentiates of India, his zeal for their cause, his hopes for their future, his profound sympathy with their undeserved suffering and calumny have kept pace with his advancing age. The oppressed licentiates still find a warm corner in his heart; and as Dr. Jamiat Ram Desai observes:

"Dada Joseph, although of late, has not been keeping good health, still he is always ready, either at mid-day or late at night, to work with us and direct us in various important matters."

So long as we are blessed with such workers, the All-India Medical Licentiates' Association will live and live usefully; and it may well cherish great hopes for the future because of such consecrated workers still living amongst us.

The present biographer, who is a medical licentiate, believes that his comrades of to-day have lost or are losing the noble trait of hero-worship. Petty differences and personal likes and dislikes smother the spirit of reverence and esteem towards the great and unostentatious workers in our cause. A resolution of appreciation when the cruel hand of destiny snatches them away—there ends the first and the last word of recognition! That should not be.

We have allowed Joseph Benjamin to work for us but we have denied ourselves the pleasure of appreciating his services in a tangible manner while he is alive. Not that he cares for reward or appreciation, not that his devotion to the cause and his affection towards the licentiates become less because we do not show our gratitude in a



Joseph Benjamin

more open manner; but it is up to us to perpetuate his memory while God still spares him to us. *The writer renders him his homage in the only way possible for him by using his feeble pen in recounting the events of his life, in recapitulating his services and in threading a garland of grateful, if ineffective, words of dedication.*

Born in 1863, educated at the Government High School, Ahmednagar, his school life was marked alike for industry and intelligence which won for him a series of scholarships and prizes for proficiency. He joined the Medical School in 1879, coming out first in the Entrance Examination. The same deserving good fortune followed him as a medical student. He knocked away all the prizes in all the subjects and topped the list in his final examination, standing first among the candidates of the Poona and the Ahmedabad medical schools, the only two schools then existing in that province.

Like all the medical students of his days, he joined the Government Subordinate Medical service in 1882. The conditions of the service were then harder than now, the pay could not have been sufficient enough to buy a decent pair of trousers and boots; the prospects were meagre and distant; and above all the scant professional courtesy and the shadow of littleness which encircled the then licentiates in service were enough to chill the most ambitious and damp the spirit of the most ardent. Joseph Benjamin, with the brilliant record as a student, with the surging hopes for the future, with the irrepressible murmurs of revolt against the miserable thralldom of service, could not have fulfilled his destiny had he not chosen to resign service and to enter the freer atmosphere of independent medical practice. He resigned in 1893, after ten years of cramped surroundings and of indentured service.

This brief experience as a medical subordinate has obviously taught him many lessons and imbued him with ideas of running to the rescue and liberation of his colleagues in service. For, we find him, soon after his resignation, writing a forceful letter in 1893 to the Bombay Gazette detailing the grievances of the Hospital Assistants and demanding redress. In 1894, he attended the Provincial Conference for medical reforms held at Bombay and while supporting the resolution on reform he placed before those who were assembled there the sufferings and turmoil of his brethren in Service. He followed this up by preparing and submitting a memorandum to the Surgeon-General, Bombay, in 1895 in which he pictured the avoidable and remediable grievances of his class. This went home and the immediate result was that the pay was raised from Rs. 55/- to 60/- per month. Meanwhile, a movement for medical reforms was set afoot by the late Dr. K. N. Bahadurji, M.D. (Lond.) and this found a strong supporter and adherent in Joseph Benjamin who was appointed to the Executive Committee formed in this connection.

We arrive at the historic year of 1906. The Hospital Assistants in Madras and Punjab, Bengal and U.P., were no whit better than his comrades at Bombay. Common suffering and discontent, the echoes of jingling fetters of slavery, the irrepressible urge for better treatment, better status and better wages found their reverberations in the minds of persons far flung and situated in this vast sub-continent. Ramchandrier at Madras, Sarju Pershad at Indore, Jotiram Motiram Pandya at Bombay, Joseph Benjamin at Ahmedabad felt the iron deeply entering into their hearts; and as a lucky chance would have it, some of them met at Bombay and sowed the seeds of an All-India Association at the Haffkine Institute, Parel, where with the assistance of Jamiat Ram B. Desai, the culture was thus set in rich and good and nutrient media of genuine enthusiasm and real desire for mutual service.

The mission of Joseph Benjamin, solitary till then, has thus and now been augmented by extra Provincial sympathy and encouragement. And from this year onwards, we find him working within and for the Association, serving it as a soldier and acting the General at times, working for the Southern-most Madras and Northern-most Punjab as vehemently as for his own Bombay. In the very same year 1906, he headed a deputation of Hospital Assistants and awaited upon the then Surgeon-General Greany, who was the President of the First Annual Conference of the Association, putting forth once again the grievances and the need for immediate redress of the Hospital Assistants in his Province.

His position as a leader and guide of the Association has thus been paved by his previous work and sacrifice and by his abiding affection and sympathy towards the down-trodden comrades of his class. In the third Bombay Conference of 1909, he presided over its business sessions. In 1911, he invited the Conference to Ahmedabad, acted as Chairman of the Reception Committee and was, at the close of the sessions, unanimously elected as the Vice President of the All-India Association of the Hospital Assistants

and in the following year as President. For a number of years, since 1919, he was annually elected to that office by the franchise of his workers till the year 1930. In 1925, he was awarded the Col. Evan's Gold Medal for the best worker of the Association and in turn, the Gujrat Branch of the A.I.M.L.A. decided to give a prize of Rs. 85/- annually for the best essay by a licentiate on any medical subject at its option, in his name. To-day there are many proud owners of this prize, and this well directed beneficence has kindled the dormant desire for medical literacy among the licentiates.

The ill-conceived draft for the establishment of the All-India Medical Council first saw the light of day in 1930. Between 1930 and 1933, India had seen an agitation against this proposal never before witnessed. Her medical men were then not conversant with the art of agitation; self-contented, quarrelling like slaves, vain and visionless. The waves of shock transmitted from the broad casting station at the General Medical Council touched the receptive receivers at Delhi and the rough tune of insult went hither and thither and provoked the medical men from their age-long slumber. They rubbed their eyes and now found themselves in an unenviable position. Joseph Benjamin was stung to the quick at the contemptuous treatment offered to the licentiates and gave vent to his noble ire in the pages of the *Times of India*. He further sent a detailed and well worded representation to the Govt. of India against the exclusion of the licentiates (1931); organised meetings of medical men throughout his province; but in vain, as the events have proved. The Govt. of India were, and are, as adamant as a rock and the medical graduates have committed the Himalayan blunder of allowing it to pass and entering meek-facedly its chambers with the forlorn hope of converting it to their point of view, after so much protest and fury. If only the medical graduates had shunned this pretentious Council and refused to enter it without their licentiate comrades, both of us would have been benefited and the Government would have been taught a lesson. Our disunity has been exploited successfully and the General Medical Council have been pandered at our cost.

Such were the services to the Association by Dada Joseph. But he was not less enthusiastic in serving the Public at large. The 1908 famine of Ahmedabad found him actively working for the stricken and was a member of the Executive Committee of the Famine Relief; he was given a certificate of merit for distinguished Famine Service. He served the Ahmedabad Municipality in various capacities for nearly a fourth of a century. He actively participated in the Temperance Movement of his Province. The Red Cross and the Boy Scout claimed his sympathy and shared his activity. He took interest in the question of education, in the problems of emancipation of women and in sundry other movements which work for the elevation of man and society. He was elected in 1928 as Vice-President of the Deaf and the Dumb School, Ahmedabad. He was also elected twice as Vice-President of the social gathering of the B. J. Medical School in his city. He was a member of

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the Bombay Medical Council from 1919 to 1930 at the end of which period he resigned. During his term of membership, he moved, from time to time, various proposals in the interest of Medical Licentiates. During the Great War of 1914 he was elected as a member of the War Relief Fund Committee.

There is one event in his life which has surprised the biographer by its strangeness. He carried the message of the grievances of the Hospital Assistants to the assembled delegates of the Indian National Congress of 1902, at Ahmedabad, of which he was one of the Secretaries. What the Congress did in this connection no body knows; but the idea was capital. It shows that our Dada exhausted all means of ventilating the grievances of his class. The Congress of 1902 was the favourite child of the then Government of India. The Congress of to-day is different.

Joseph Benjamin is a gentleman in every sense of the word. His compassion towards the suffering is the motive force of his service. He ennobled the family in which he was born by overstepping the narrow walls of personal selfishness and ambition. He adorned the society into which he was thrown by acts of self abnegation and honest service. He dignified the profession to which he belonged by extending his activities to fields other than mere medical practice. He has laboured hard and long to uplift the medical licentiates and if he has not succeeded in all fronts, it is not his fault. The Chinese wall that enthalls his comrades is built high and strong and only the relentless hand of time can demolish it and liberate the slaves within.

But that time is not far off—thanks to Ramchandrier, Sarju Pershad, Joseph Benjamin and a host of other warriors of our class.

OUR CONTEMPORARIES

THE SURGERY OF AMELIORATION FOR INTRACTABLE UROLOGICAL LESIONS

BY JOSEPH FRANCIS MCCARTHY, M.D., AND
J. SYDNEY RITTER, M.D.

(Reproduced from the Proceedings of the Inter-State Post-Graduate Medical Assembly of North America: we appreciate the courtesy of the authors in sending us a re-print of their lecture for our use. Editor I.M.J.)

The theme selected for the year's presentation to this audience, unique in this country at least, is of much importance if only for its humanitarian purpose. The subject matter enlarges proportionately with the contemplation accorded it. Your indulgence is therefore asked should any or all the themes selected be given what may appear insufficient consideration.

For better understanding of what seems an ambiguous title, this communication will attempt an elucidation of the writer's present viewpoints on certain surgical conditions involving the urogenital tract, such as at first are insusceptible of, or inadvisable to attempt, radical surgery. For the most part, however, it will give thought to the alleviation of the inevitable and progressive distress attending lesions, especially malignancy and tuberculosis wherein radical curative surgery is not feasible.

Kidney

In extensive pyelonephritis we are occasionally faced with the problem as to the wisdom of a primary nephrectomy with its extensive adhesions, its almost inevitable fouling of the operative field, its attending high mortality; or shall we refrain from extensive tissue cleavage under most unfavourable conditions and without further ado, simply incise, break up intra-renal pus pockets and drain.

There is but one real answer to this problem: our own experience and the teaching of our preceptors. This much should be said, however, that given a case of extensive pyonephrosis as proven by the usual methods, wherein the risk to the patient is grave, one should make every effort to arrive at a decision before operation, and if in doubt, nephrotomize rather than nephrectomize. To compromise after considerable tissue separation and probable field soiling, while at times necessary, is, none the less, faulty judgment. In a sentence our advice is—whenever in doubt—nephrostomize.

Case Report.—Male, age 70. Considerably emaciated. Chief complaint, fever embarrassed respiration. Pain and mass in right side. Difficulty in voiding. Operation appendectomy three weeks prior. Physical examination—essentials are as follows: Systolic murmur at base; flat percussion note below third intercostal space. This was confirmed by X-ray study which revealed the mass had encroached upon diaphragm and embarrassed respiration. Operation—nephrostomy, avoiding unnecessary tissue separation; introduction of nephrostomy tube. Following a stormy convalescence of eight weeks, patient returned to his home. Now after several months during which he has gained twenty pounds, patient can reasonably support secondary nephrectomy. Primary nephrectomy in this case would doubtless have had a less fortunate outcome.

Case Report: Philip K. age 7, admitted to the New York Post-Graduate Hospital some five years ago. X-ray and cystoscopy revealed absence of right kidney. Left kidney was greatly enlarged filling the left side of abdomen. This mass was tense and elastic. No indigo-carmin secreted in two hours. The mass was simply incised, nephrostomy tube introduced. Since discharged from the hospital some five

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what can or should be done to alleviate inevitable distress? The first has an economic and humanitarian goal; the second and perhaps not less important is humanitarian.

With the single exception of an unilateral growth with extensive involvement of the ureter on the affected side, wherein a hemi-cystectomy and possible nephrectomy (inasmuch as there is almost always an associated pyelonephritis) is feasible; early and total cystectomy with ureteral implantation wherever you will, should be the rule. More power to the urological surgeon here and there, few though they be, who with courage of heart and mind and skill of hand, recognize and pursue this humanitarian practice. Let us stop temporizing with this form of infiltrating carcinoma of the bladder.

Metastasis

Even in the presence of metastases, we believe cystectomy should be performed for symptomatic relief whenever it be feasible. With this clinical picture, alleviation is of course the sole objective.

Deep X-ray Therapy as a curative, or even as an arresting agent for infiltrating carcinomata of the bladder (an euphemistic term employed by protagonists of radium) has, in our hands, been a complete failure.

With the clinical picture in the retrospect of many years contact with this virulent disease, its manifold phases, its failures, its vicissitudes; it is difficult to contemplate in an atmosphere of judicial detachment, the futilities, the compromises, the procrastinations inherent in present day methods. The preceding commentary may appear to some as a bit trenchant. Should it serve the underlying motive of an awakened consciousness of the advantages of early and radical removal of this potential threat to life and comfort, as a replacement to the radical conservatism of the moment, its purpose will be served.

Cystostomy—Cystotomy

Because of the variations one observes in the technique of extraperitoneal approach to the bladder, there is a very evident need for simplification. When the bladder is susceptible of considerable distension, this is one of the easiest of surgical operations. In secondary cystotomies, as also with contracted bladders, one must proceed with considerable care.

Methods of Approach

Given a contracted type of bladder or wherein a previous operation has been performed, patently, the individual approaching cystotomy must frequently submit to the added risk of considerable tissue separation, in the careful approach to the anterior bladder wall. Where however the bladder is susceptible of sufficient distension with sterile fluid, (our routine), it seems to us inexcusable to separate the tissues of the prevesical space as a primary step. Such an approach carries an added morbidity and mortality. Nor is much to be gained by the various

devices for the puncture type of decompression, wherein second stage prostatectomy for example, is later to be performed. In the latter instance, subsequent tissue separation is necessary, and, at a time when such separation is most disadvantageous.

The Following is our Counter Proposal.—A transverse incision about 5 c.m. in length is made which begins about 5 c.m. above the symphysis. This incision is carried through the rectus sheath; the muscle fibres are then separated longitudinally to the deep fascial layer by blunt scissors; the parts retracted by Parker retractors. Prior to the foregoing steps a new type of bladder irrigator has been introduced which is similar to the old fashioned steel catheter, except that its terminal carries a cold electric lamp and the catheter provided with a stop-cock. After thorough irrigation, the bladder is filled to capacity and then partly emptied. At this moment the catheter is depressed from without so that the illuminated point is moved along the anterior bladder wall. As the organ empties one may then see the intraperitoneal structures encroach upon the bladder and on further filling, observe these structures move away from the point of prospective bladder incision. With the light pressing against the anterior wall, a large aspirating needle is introduced at or about the point of greatest light intensity, some fluid content aspirated, the parts on either side of the needle seized with Allis forceps and a transverse incision made into the bladder in the usual manner. This procedure affords every possible protection and obviates unnecessary tissue separation. It is large enough for an average bimanual enucleation, though occasionally some slight extension of the rectus sheath incision may be necessary. When carried out as above, there is little or no space present for a drain. In a sentence—as minimal a degree of tissue separation as is consistent with the safety of the patient, is the desired objective.

Vesical Extrophy

Here, one of the banes of the ages, seems about to give promise of at least measurable success, in the achievement of physical comfort, and who may gainsay it—the pursuit of happiness. In the efforts to ameliorate the condition of these unfortunate and innocent victims of so tragic a visitation, the name of Coffey will for all time, remain inextricably interwoven. To Charles Mayo, Lower, Walters, Higgins, and others, much of present progress may be attributed and much more anticipated.

The ground covered in this communication is so extensive, that necessity limits us to abstract discussion. In brief, it may be said:—

1. That the case for uretero-sigmoidostomy while fairly well established, is not yet a closed one in so far as concerns any particular technique;

2. That precise knowledge of the size and course of the ureters, as well as the presence or absence of associated pyelitis or pyelonephritis, is an obvious antecedent to intelligent decision as to disposition of ureters;

8. In a fair number of cases, corrective surgery of the kidneys and ureter should antedate or parallel the placement of ureter in the bowel;

4. Where a nephrostomy may be indicated prior to uretero-sigmoidostomy, one must not forget the possibilities of therapy to renal pelvis and ureter by way of the nephrostomy tube;

5. That the appropriate age for intervention is at times more dependent on renal and ureteral status than on actual years, though Coffey in a personal conversation stated it as his belief, "the younger the better."

6. That some of the associated pathology of ureter and kidney may result from congenital anomaly. It is more likely, however, that much of it is due to obstructive oedema at or about the uretero-vesical orifice. Fortunately, such information and follow-up is readily available to the pediatrician through the aid of excretion urography.

Uretero-sigmoidostomy for relief of bladder malignancy presents somewhat different aspects. Here we have a patient usually in the fifties or later. Here again, we must know the type of ureter with which we are to deal. Certain types of associated ureters are so dilated and inelastic as to render bowel implantation impractical and wherein abdominal ureterostomy is the operation of choice.

Case Report.—I.S. a Russian Jew, first came to our attention some twenty years ago, age then about 80. Had been operated at Petrograd, Vienna, and New York, nine entero-plastic operations had been done in an effort at closure of the extrophic bladder. He co-operated with us for many years for purposes of demonstration. For most of these years, though he really did have a roof on his bladder, it leaked from several permanent sinuses. Of course there was constant ammoniacal fermentation with its accompanying odor. The urine was retained in the bladder with the aid of a mechanical appliance, there being no sphincteric control. About seven years ago, myxoid carcinoma developed in this extrophic bladder. It was opened, more extensively than before. Abdominal ureterostomy was proposed and accepted. The ureter was so bound down to its retroperitoneal bed, so resistant and inelastic, that the operation was concluded with ureterostomy of that side only. The other side was deferred. The treatment of the ureter is worthy of note. The liberated ureter was severed from its bladder attachment, a large ureter catheter introduced to which the ureter was tied. The abdominal muscles gridironed with a Kelly clamp and the catheter with attached ureter drawn through this tunnel. No fixation sutures were employed. Retraction was prevented by external application of a sterile safety pin. When the redundant ureter had sloughed away, the ureteral catheter was removed and from that time until his death, intubation of this ureter was never attempted. Before the time arrived for ureterostomy on the other side, it became evident that the kidney of that side was pyelonephritic. It was extirpated under nerve block anesthesia (at the patient's request). Later, cystectomy was carried out again under block and infiltration

anesthesia, and at the patient's request. The patient made a very satisfactory recovery; remained as night orderly in our wards for four or five years, and believe it or not, this sole remaining kidney on his last examination showed a four plus colour intensity and a two minute indigo-carmin time appearance. The recurrence of the malignancy in the old bladder incision, and most surprising of all, in the old kidney incision was too much for this valiant soul, so one day he made an iodine cocktail for himself and passed away a few days later. His death marked the departure of the gamest individual that ever crossed our clinical path.

The whole subject teems with interesting possibilities such as the advances in drug therapy; the surgical procedures of sympathectomy, cordotomy, etc., upon which others better qualified than the writers, are making notable contributions. In medicine as in travel, one should always leave behind some thing or place worthy of later investigation.

Conclusion

We have endeavoured to stress certain high points in the alleviation of patient discomfort. The real intent, however, is to enlist a more active interest in the less spectacular—the more drab, the less appealing—the more humanitarian side of medicine, though for the most part, our chief reward will be personal satisfaction and patient's gratitude.

TENDENCIES IN PRESENT-DAY MEDICINE

By V. M. SYNGE

(Extracted from *The Irish Journal of Medical Science*, November, 1935, P. 653)

During the past few decades the crest of the wave of medical advance has been changing. At the end of the last century pathology was most prominent; this was succeeded by bacteriology, then came biochemistry, and at the moment psychotherapy has come to the fore. We notice here a tendency to move from what we can see with the naked eye and with the low power of the microscope, to what is only apparent with an oil immersion, on then to the more elusive bio-chemistry where electrons buzz round which we can only visualise mentally, and then into the misty fields of the dreamlands of psycho-analysis.

The mental equipment of the medical man at the different age periods of his activity, i.e., from 25 to 70 in most cases, depends upon four factors. A is a constant factor for each individual. It is made up of

- (1) inherent mentality,
- (2) acquired mentality, i.e., mentality acquired during childhood and school period.

The value of this factor depends largely on the possession of disciplined thinking power, common-sense, and free mental judgment, that is to say, when the mind is slave to no dogma of any sort. B represents the medical knowledge which the individual absorbs during his medical school career and the few

subsequent years. This factor diminishes as he goes through life. *C* represents knowledge gained by practical experience. This factor increases progressively. *X* is the variable absorption (or creation, in the case of the leaders in medicine) of new medical knowledge. The value of *X* varies enormously in different individuals. At any particular time the medical man's capacity for the efficient diagnosis, treatment and prognosis of his patient's diseases is represented by

$$A + B + C + X$$

At the present time *A* is tending to become less, at least in some countries, owing to the lessening of the minimum standard of secondary education which is required to enable an individual to commence the study of medicine. *B* is also becoming of less practical value as the medical curriculum is lagging more and more behind modern medical knowledge, and this is likely to continue for so long as the dominant idea in the alteration of medical education is to add to the curriculum without at the same time eliminating out-of-date material. Your engine will not run well, if you are content to keep on putting in oil without ever draining the sump.

The value of *X* depends upon :—

1. The greater the mental capacity of the individual, the greater *X* tends to be.
2. Amount of medical progress—new discoveries in diagnosis and treatment.
3. Accessibility of these new discoveries. Discoveries may penetrate by medical journals, monographs, text-books; by medical meetings; by commercial advertising.
4. The instruments, if any, necessary to implement the discoveries must be available.

The rate of medical progress depends upon research. The word research properly means "endeavour to discover facts by scientific study of a subject." "Scientific study" means accurate observation of what happens under natural circumstances or of what happens under experimental conditions, and the drawing of conclusions from the information thus obtained by a process of logical reasoning. The tendency in recent years has been to restrict the "research" to work done in a laboratory, and in fact we have almost reached the point where any laboratory work may be styled "research." The endowment of research in some countries has been very great, but the results obtained have not been of commensurate value. This may be attributed to several different causes :—

- (1) Research is often done to order. At the present time a great deal of emphasis is laid on published work. Anyone who is a candidate for a medical post is expected to have published something, and in some quarters his merits are considered to be proportional to the volume of his published work. This is regrettable. Some published work is useless and much is of no great interest or value. This applies usually to work which is published for the sake of publication.

- (2) There is a magic about the word "research." There is a feeling that anything which can be dubbed "research" puts the author in the seats of the mighty, and makes him feel that he is one of the elect who are advancing medicine. Research scholarships are numerous and, to a man recently qualified, appear to offer easy money with little responsibility, so that many clever men who are more suited for practical clinical medicine than for laboratory investigation are attracted to research.

- (3) A man who devotes his life to research is poorly paid. A brilliant man, perhaps a man with a natural bent for research may have to engage in ordinary practice simply for economic reasons.

- (4) Too much stress is laid on the elaborate apparatus necessary for research. A genius with no apparatus can often discover more than a mediocrity with elaborate apparatus. Research workers are for the most part born, not made.

- (5) Research is often out of touch with current—especially clinical—knowledge, and therefore the objects of the research worker's investigations are often of no practical value.

- (6) Teaching and research are, as matters stand, usually bound together, but the man who is a good teacher is often a poor research worker, and vice versa.

For these reasons modern efforts towards research produce less results than they should.

At the present time the output of medical literature, is immense, so much so that it is impossible to keep in touch with all fresh developments. The difficulty in looking up the recent work on any particular subject is very great. There is no adequate international index of medical journals. Such indexes as exist do not give a fair resume of all medical literature, but only of that of their own country.

There is an increasing tendency for the production of monographs on special subjects. This is all to the good.

The expansion of medical knowledge has led to the appearance of ponderous expensive medical text-books. These become out of date very quickly, one might almost say before their purchasers have finished reading them. Handbooks of medicine are for the most part not good. Everybody seems to think that he must write one.

The good habit is spreading of holding medical meetings, both local and international. It is a great advantage to see and hear medical authorities. By so doing one can often decide whether it is necessary to read their publications or not.

The use of instruments is increasing rapidly. Long ago the physician required nothing but a thermometer. Later he had also to be equipped with a stethoscope. Fifteen or twenty years ago he had to invest in a sphygmomanometer, and now he must also have a percussion hammer as well as batteries of syringes and so forth. Medicine is becoming more complicated and more mechanised.

In therapeutics the "duckshot prescription" is now almost a thing of the past. In fact, prescriptions, in

the proper sense of the term, are being written less and less frequently, and proprietary articles are taking their place. The boom of vaccines is also greatly on the decline, and the indiscriminate use of endocrine preparations is becoming less common. At the moment the synthetic chemical holds the field, and the pharmaceutical chemist is rapidly becoming merely a distributing agent for the large chemical firms and combines. The approach to the doctor is mainly through personal circularisation and advertisement, rather than through purely medical channels. The doctor evaluates the remedy mainly by the good old empirical methods of trial and effect. Theoretical considerations are difficult and involve such a deep knowledge of bio-chemistry and pharmacology that in most cases they are almost out of the question, at least for the average doctor who is actively engaged in treating patients. In most cases the course of a new therapeutic procedure, e.g., artificial sunlight, is as follows:—first it is employed cautiously, then it is used indiscriminately for the treatment of almost every disease, disillusion follows and its use rapidly declines, it falls into disrepute, and finally it is used in a limited way for those conditions only for which it has proved to be really beneficial.

Specialisation is rapidly increasing. Specialists may be divided into three classes :—

1. those who know something about everything and a little more about something. This is the old-fashioned type of specialist;
2. those who know everything about something and nothing about anything else. This type is increasing;
3. those who know something about everything and everything about something. This is the most useful type, and if a team of specialists is to function satisfactorily the individual specialists must be of this type.

We have considered the forces of medicine which are acting. We must next consider the material upon which they act—the patient. And the patient is changing rapidly just as medicine is changing. The unknown is always mysterious, and to the patient medicine is still largely a mystery, but it is tending to become less so. The idea of the magical powers inherent in the tall-hatted, frock coated physician of our fathers and grand-fathers is dying out and is being replaced by the idea of power possessed by the instruments which the present-day doctor uses. A motor car seems a wonder to the ignorant peasant and an X-ray apparatus similarly seems a wonder to the patient. How often do we meet in hospital dispensaries the patient who says that she got a bottle for her ailment, but that she is no better, and "Doctor, I thought maybe I should be put under the X-ray?" But the present-day patient is no longer satisfied with the doctor who looks wise and who merely prescribes treatment, the patient wants to know what is really wrong with him. He has not so much faith in the efficiency of treatment, he is more interested in prognosis. He is not afraid of entering hospital, in fact he sometimes becomes too fond of remaining there. The idea of

the family physician is gradually passing away. Formerly the family physician was the friend and counsellor of the family for life-long years. He enjoyed the patient's full and lasting confidence, just as the family lawyer and the clergy-man did. Now the doctor is treated more on a business basis. The patient goes to him when he is ill, when the illness is over he pays him his bill—usually but not always—and if he falls sick again he may or may not consult the same doctor. The mental attitude of the public to health and illness is altering. The public have now a greater knowledge, usually imperfect, inexact, and somewhat out-of-date, of medical matters. An operation is not feared as it once was. It is regarded as a more radical and quicker cure than medical treatment. There is an attractive glamour about any complicated method of examination, and amongst the more backward members of the community there is still a satisfying magic in the oscillations of the sphygmomanometer pointer or mercury column, more especially the former. Whilst the doctor is losing his personal magic, the magical idea still persists in his instruments. But when all is said and done the patient is slowly advancing in his medical outlook, and this despite the deluge of quack medicine and pseudoscientific medical advertisements.

I am afraid that I have given you but an imperfect view of the tendencies in present-day medicine, but tendencies are always intangible things. No one in 1835 could have had the faintest idea of what medicine would be like in 1935, and anyone to-day who thinks he can foretell what medicine will be like in 2035 is either a fool or a madman. We can only observe the ripples on the surface of medicine during the few decades which come under the personal observation of each of us, and we will certainly differ widely in our interpretation of what these ripples signify. A great discovery may throw a big stone into our pond and make a splash which destroys all present-day ripples and starts a new set of waves of its own, or the smash-up of present-day civilisation, which the pessimists are so fond of taking about, may freeze the water and stop the ripples altogether.

MEDICAL COUNCILS

Copy of resolutions as proposed by Dr. S. L. Sharma and as passed by the State Medical Faculty, United Provinces at their meeting held on November 25, 1935.

1. "The United Provinces State Medical Faculty recommends that the Final Examination of M.S. M.F. be held during the month of April."

Resolved that the Final Membership Examination be held in April from the year 1937.

2. "Resolved that the transitory period of M. S. M. F., be extended to three years and the admission to that course should take place on August 1."

Resolved that (a) The Government be requested to extend the transitory period of the training of M.S. M.F. for another three years i.e., upto April 30, 1939. (b) The admission to that course may take place on August 1, and (c) The next examination be held in April, '37.

3. "Resolved that the July meeting of the State Medical Faculty be revived; if for financial reasons the third meeting cannot be held, the February meeting be kept in abeyance till financial stringency is removed."

Resolved (a) In the year 1935-36 February meeting be held.

(b) In future, February meeting be held in abeyance and July meeting be revived, and

(c) The budget be placed before the November meeting which should be held either at the end of November, or in the beginning of December.

Government be addressed to sanction these changes.

4. "Resolved that Pandit Gur Dayal Misra, the Head Clerk of the Medical School, Agra, in appreciation of his brilliant and loyal services he has rendered to the above mentioned school and the United Provinces State Medical Faculty is hereby allowed to continue to work as the State Medical Faculty clerk on the same pay after his retirement from his present job."

Resolved that the Faculty recommends that the allowance of Rs. 25 - per mensem at present sanctioned for the Head Clerk, Agra Medical School, for doing its work be given to Pandit Gur Dayal Misra, retired Head Clerk, Agra Medical School, for doing the State Medical Faculty work, for a period of two years provided Government sanctions it.

5. "In view of the acceptance of the demand of the Medical Licentiates for increased representation on the Governing Body of the United Provinces State Medical Faculty by His Excellency Sir Malcolm Hailey, the late Governor of the United Provinces, the United Provinces State Medical Faculty recommends the United Provinces Government to kindly increase the number of the Medical Licentiates on its Governing Body from two to four, one of them to be a women Medical Licentiate."

An amendment was moved by Dr. Vyas that the increase be from two to three. The house divided as follows:—

For four, Dr. Sharma

For three, Drs. Vyas, Morton, Dikshit, Pandya, Miss Sharma.

The amendment was therefore carried.

Thereupon the following resolution proposed by Dr. Vyas and seconded by Col. Bharucha, was carried unanimously.

Resolved. That the number of Medical Practitioners holding L.M.P. qualifications be increased from 2 to 3 on the Governing Body of the State

Medical Faculty. The Third member who will be elected by the U. P. Branch of the All-India Medical Licentiate's Association of Meerut, should be in Government service and should possess teaching experience.

Government should be addressed.

With reference to resolution No. 3 of February 1935, G. O. No. 672 V-80 dated June 13, 1935, was read.

Resolved that with reference to G. O. No. 672/V-80, dated June 13, 1935, the State Medical Faculty has no opinion except to carry on the medical education at the Agra Medical School in its present unsatisfactory form. But the Faculty desires to bring to the notice of the Government its previous resolutions as to the necessity of raising the standard to the level of the University education. If the Government are unable to accept the repeated and unanimous demand of the Faculty, they recommend that the Agra Medical School be disestablished, as it is not desirable to encourage any longer the present inadequate system of medical education as it has so far obtained at that institution, and do not feel that they are justified in issuing diplomas.

7. The results of the Nurses, Midwives and Assistant Midwives examinations held at the Thomson Hospital, Agra, in September 1935, were considered. Resolved—That (a) The results be approved. (b) Dr. Sharma, however, suggested that the courses of instruction for the nurses examination and the examinations themselves be held in Vernacular instead of in English. This was carried.

Resolutions moved by Dr. S. L. Sharma, F.S.M.F. (Hon.) in the meeting of the U. P. Medical Council held on 30th March 1935.

*

1. Resolved that the Sub-section 1 a, of section 4 be amended as follows:

President should be a non-official, elected by the council.

2. The Medical Council notes with great regret that its repeated recommendations to raise the standard of the Agra Medical School have not been given effect to by the U. P. Government though this council itself as far back as 1916 had recognised and acknowledged the deficiencies in the training imparted at the Agra Medical School and inaugurated "the Agra L.M.S. Scheme" which was approved and supported by the U.P. Medical Council and several prominent Medical and public gentlemen; but the scheme in spite of the Government's earnestness as expressed in 1917 in the following words by Col. Mactaggart, the then Inspector-General of Civil Hospitals, in his speech on the occasion of the 12th Annual Conference of the All-India Medical Licentiates' Association, is still lying as a dead letter.

"It has been a matter of great gratification to me to know that the Agra L.M.S., Scheme has received the unanimous support and approval of those whom it was intended to benefit viz., the practitioners of your class and you may rely on my doing, all I can

if I am here after the war to push the scheme into operation, and I feel confident that if I am not here my successor will take similar action and that the Government will not allow it to drop". The Medical council respectfully draws the attention of the Government that the deficiency of training at the Agra Medical School re-acts badly on the future prospects of its products and also adversely affects the well-being of the nation which is a serious loss to the public from an economic and public health point of view; hence in the interest of the students and public as well, the Medical Council resolves that the students who would be admitted into the Medical School, Agra, in the year 1935 or after it, will not be admitted to the U.P. Medical Register if the standard of training is not improved and raised to 5 years.

Resolution moved by Dr S. L. Sharma, F.S.M.F. (Hon.) in the meeting of the U.P. Medical Council held on 26th Nov. 1935.

1. "The United Provinces Medical Council recommends to the Government to be pleased to rescind amendment No. 1 to the rules framed under section 2 of the Poisons Act and published in the United Provinces Gazette, vide Judicial (Criminal) Department No. 1273-VI-1776-1930, dated

September, 20, 1933 and No. 1000-VI-1776-1930, dated April 15, 1935, because the said amendments adversely affect qualified Medical Practitioners in the exercise of their profession and are contrary to the provisions of section 9 (1) of the said Act which specifically exempt medical practitioners from any rule made under that Act."

2. The Medical Council calls upon Major P. N. Basu, I.M.S., late Civil Surgeon and Superintendent, District Jail, Bareilly, to explain why his name may not be erased from the United Provinces Medical register for the wonton negligence and refusal to render professional medical aid to his subordinate Dr. Raghubir Sahai, in charge, District Jail Hospital, Bareilly, in spite of the repeated requests from his elder brother who is an Advocate of the United Provinces High Court, to attend on him. The said Doctor had received a cut in his finger while operating in the District Jail Hospital, Bareilly, on an under-trial prisoner who had a septic abscess, that cut caused him septic fever and eventually brought about his death within a week."

The mover agreed with the President's suggestion that a definite complaint should be submitted by him which, if necessary, could be referred to the Standing Committee, and, therefore, withdrew his resolution.

LETTERS TO THE EDITOR

Sir,

Permit me to review Dr. H. W. Long's "Sane Sex Life" in your pages.

Dr. Long speaks frankly, and frank utterances on sex matters are commendable when they are addressed to intelligent, self-controlled people. Scientific discussions of sex never arouse prurient thoughts except, perhaps, in the minds of young persons.

The best portions of Dr. Long's book treat of courtship. He rightly believes that many brides are raped in the bridal chamber, and that such raping decreases a wife's regard for her husband and her favourable opinion of marriage.

It is true, as Dr. Long says, that time must be given to courting in order that the pre-coital and prostatic secretions may properly prepare the parts for coitus, and that husband and wife may reach the climax or orgasm simultaneously. Animals take time, whole days, for the courting or rutting period.

Dr. Long speaks of the prostatic fluid as a lubricating agent, but does not mention its other two probable functions: (1). To promote the ejaculation of semen, and (2) To cleanse and neutralize the common channel through which both urine and semen pass. The acid condition of this channel caused by urine might destroy the spermatozoa if the channel were not neutralised by the alkaline prostatic fluid. Therefore time for courting or rutting is absolutely necessary in order that sexual passion may progress to the point where it causes the chan-

nels of generation in both husband and wife to be bathed with alkaline fluid. Too quick coitus may prevent a fertile union.

I was a little surprised to see no mention in Dr. Long's book of the aid to sexual passion rendered by the male and female odoriferous glands and by the hair of women. The odour of women's hair acts as powerful sex excitant on men and yet women "bob" their hair. The sex odour of women's hair seems to increase at the time of rut.

Dr. Long denies that there is a time of rut for men and women. He is wrong. Women—normal women of the multipara type—are always in heat when their ova are ripe for impregnation and are not in real heat at other times. It is woman's heat that excites man's heat.

Dr. Long believes that husband and wife should indulge in coitus for pleasure as well as for the procreation of children. He makes altogether too much of this. He seems to think that coitus affords the highest bliss to be found on earth. He is wrong again. There is a whole world of spiritual joys alongside the least of which coitus is dull and tame. Even when we confine ourselves to a consideration of fleshly pleasures, the odoriferous glands of a woman who is in a high state of sexual passion can emit a sharp fragrance that melts a man's body in a sea of bliss that exceeds the pleasure of coitus itself.

Dr. Long is also wrong in thinking that human coitus, unlike that of animals, can partake, and does

partake, of a spiritual quality. Coitus in the case of both animals and men is a purely animal act. Animals probably derive as much pleasure from the act as human beings do, with this difference, that animals are probably unable to reflect upon its delights as human beings can.

Despite Dr. Long's statements, married people make a mistake in considering coitus the chief pleasure of married life. There are many joys in marriage superior to coitus. Even long periods of continence can be made pleasurable. Continence is practicable, and not injurious. To spiritualize fleshly pleasure is almost the unpardonable sin.

Dr. Long favours coitus reservatus. Coitus reservatus is a heinous crime, and causes impotence in men.

Coeur d'Alene, Idaho,
U.S.A., Dec. 2, 1935

CHARLES HOOPER

A Correction

SIR,

In my article on *Black-Water Fever in Madras* published in the December issue of your Journal, the following sentence occurs :

"It may be interesting to note that case 2. though he gave a history of developing Jaundice everytime he took quinine, yet during the attack of B. W. F. he was able to take quinine in gradually increasing doses up to a maximum of 15 grs. a day."

This ought to read as :

"The second case is also of interest in that, though the patient showed idiosyncrasy to quinine by developing Jaundice everytime he took the drug before the attack of Black Water Fever, he was able to take quinine in gradually increasing doses up to a maximum of 15 grs. a day."

Quinine was administered, in the above case referred to, not during the Black-Water Fever but after the attack of haemoglobinuria had completely passed away. The patient was having a slight rise of temperature in the evenings (as can be seen from the report of the case) after the attack of Black-Water Fever had subsided. It was thought that he might have been suffering from malarial cachexia. To combat this, he was given quinine and he readily responded to the same.

Madras,) Y. SURYANARAYANA ROW
15-12-35)

(We regret the error in editing. Ed. I.M.J.)

The Late Rai Bahadur Dr. Sarju Prasad Tiwari

SIR,

The hand of Death has removed from us one of the outstanding personalities intimately connected with our Association. I have known the late Rai Bahadur through the late Dr. P. S. Ramachandra Iyer more than two decades ago and our first meeting was at Hyderabad (Sind) in the year 1915. The late Dr. Iyer and Rai Bahadur were like inseparable twins carrying on the work of the Association with

uncommon enthusiasm and energy. If Dr. Iyer laid the foundation of the Association and built it, the Rai Bahadur served as one of the important pillars without which the edifice would have crashed. The stupendous success achieved by our organisation was mainly due to these two outstanding personalities besides a host of others—not many to mention—who are equally responsible for the building up and fostering of the welfare of the Association. Having through great modesty and hard work found his way from the humblest beginnings to all known fame, his heart never ceased to rest in sympathy with the struggles of many of the less fortunate and obscure workers in the cause of human welfare. A genial smile ever played round the corners of his handsome face when he moved in company with his tall and charming personality. It was left to him, as to a few others, to prove that a Hospital Assistant, as he was so known in the old days, was capable of reaching the very top of proficiency both in Medicine and Surgery through intelligent effort and unyielding tenacity of purpose. His generous zeal would never allow him to miss even a single Conference of the Association wherever it was held. At every gathering his great tact, large-heartedness, cool judgment and desire for harmony ever enabled him to put an end to the squabbles of heated argument and spread a healing balm over all agitated hearts. As I re-read his letters to me, an over-powering feeling of his selflessness and generous appreciation of any work done in the interests of the great organisation moves my grateful tears. In the verge of great changes that we are going through, it is indeed a great misfortune that the Association should have been deprived of the benevolent guidance of so good a man and such a masterful personality. Would it be vain to suggest to the Association to raise a suitable memorial for him in grateful recognition of the public services of this grand old man of our Association?

Madras)
4-12-35)

D. V. VENKAPPA

A Suggestion to The Punjab Medical Council

SIR,

May I crave the hospitality of your esteemed Journal for the publication of the heartfelt grievance which most of the voters feel at the time of election to the Punjab Medical Council. The addresses of Licentiates in Government Service invariably vary on account of their frequent transfers in and out of season. The ballots, if not way-laid by some interested persons, take unusually long-time to reach their destination.

To me there is only one solution which, if approved, may with advantage be followed by the office of the Registrar at the time of compiling the electoral roll and that is to consult the Half Yearly Graduation List of Sub-Assistant Surgeons and Rural Medical Officers, obtainable in the office of the I.G.C.H.

Amritsar,)
28-11-35)

ISHAR DASS BHATIA

NOTICES

IMPORTANT

Any amendment which has to be given notice of by virtue of rule No. 18 by any member of the A.I.M.L.A. should be sent through the General Secretary only. We have no authority to publish Association Correspondence or Notices, or Notes without his endorsement. As we go to the press one month in advance, we would also particularly request the members who desire to notify amendments to send the same in time. We shall not be held responsible for non-publication of notices of amendments not received in time. (Editor I.M.J.)

The Scientific Committee of The All-India Medical Licentiates' Association has decided to award two prizes of the value of Rs. 50 - and Rs. 25/- for two best papers in each of the following subjects:—

1. Incidence of Protozoal infections of the intestines and the methods of their eradication.
2. Blindness in India, its causes and how to prevent it.
3. Causes and treatment of chronic enlargement of Tonsils in children.

The papers must be based on writer's own observations and only the members of the All-India Medical Licentiates' Association shall compete for these prizes.

The papers must reach the Secretary at least ten days before the next Annual Conference.

In the award of these prizes, the decision of the Scientific Committee shall be final and the members of the Committee present at the Conference shall form a quorum for this purpose.

The Committee shall reserve the right to withhold any of the prizes, if in its opinion no paper merits distinction.

The competitors may, if they like, present themselves at the Conference (of course at their own expense) to reply to the criticism on their papers.

For further particulars a reference may please be made to the Honorary Secretary, Dr. Chhabildas, Civil Hospital, Ludhiana (Punjab).

The Honorary Secretary, Gujrat Branch of the A.I.M.L.A., writes.—

The period of submission of Dr. Ramachandrier's Prize Thesis for the year 1935, as announced in the *Indian Medical Journal* for May, page 264, is extended till the end of March 1936. Intending candidates are, therefore, requested to send their papers to Dr. Joseph Benjamin, President, Gujrat Branch, A.I.M.L.A., Dhalgarwada, Ahmedabad, so as to reach him on or before the due date.

The Registrar, Madras Medical Council asks us to notify the following.—

It has come to the notice of the Madras Medical Council that proceedings of meetings of some District Medical Associations in the mofussil are published in the lay press. The question whether the publication of such reports in non-professional journals is permissible has been considered by the

Council and it has been decided that such publication is, in the opinion of the Council, contrary to the Code of Medical Ethics, excepting in a few cases specially relating to Health Propaganda. The Madras Medical Council therefore desires the Secretaries of all Associations to be informed that they should label discussions and lectures in their Agenda as not for lay press publication whenever this course is considered desirable from an ethical point of view.

Amendments suggested by the U. P. Standing Committee to the New Rules of the A.I.M.L.A.

1. Rule No. 37 should read as follows:—

That the Association shall cause every year, preferably during Xmas, an Annual Conference of the members of the Association. Moved by Rai Sahab Dr. R. N. Lal and carried unanimously.

2. In rule No. 47 substitute the word 'Four' by 'twelve' in 3rd line of the rule.

3. Add clause new (8) under rule 55. viz.,

A Provincial Branch may be formed in any Province consisting of the members of the Association residing in that Province provided it has a constitution of its own on the lines of the Mother Association.

4. Add prefix to rule 65.

The Provincial Branch of a Province shall elect a Provincial Secretary according to its constitution.

5. Delete the sentence 'No elected delegates shall be entitled to travelling allowance' in rule No. 68.

6. In rule No. 229 delete 'No' before "Delegates"; add 'All the' and in place of 'except' substitute 'and'.

7. In rule No. 252 delete the words "who shall be a member of the Association only".

8. In rule No. 261, delete 'Reception Committee only' in the last line of this rule and add the word 'Association.'

9. In rule No. 267 delete 'one year (12 months)' and substitute '3 months.'

10. Amend rule 269 as follows:—The Subject committee shall consist of all the Ex-Officio delegates and other elected delegates.

11. Amend the rule 282 as follows:—None but the bonafide members shall vote. A resolution rejected by the Subject Committee shall not be considered to have been passed unless voted by a majority of $\frac{2}{3}$ the members in the open Conference. Similarly a resolution passed by the Subject Committee shall not be rejected unless it is so rejected by a majority of $\frac{2}{3}$ the members in the open Conference.

SERVICE NOTES

List of Changes Among men Sub-Assistant Surgeons in the Punjab During the Month of October, 1935

Dr. Ram Sarup Gupta, on reversion from the N. W. Railway, to Mand Kaula Dispensary, Gurgaon District.

.. Mela Singh, Mand Kaula Dispensary, Gurgaon District, to Central Jail, Montgomery, Relieving Dr. Sher Singh whose services have been placed at the disposal of the Agent. N. W. R. Lahore.

.. Gian Chand, M.S.M.F., 2nd Class Senior, On reversion from the N. W. Railway, to Dinga Dispensary, Gujrat District.

.. Tola Ram, Qila Gujar Singh Dispensary, Lahore, to General Duty, Civil Dispensary, Lahore.

.. Parmeswar Singh Sodhi, General Duty, Civil Hospital, Gerozepore, to Mehta Dispensary, Amritsar District, Vice Dr. Ram Nath Sharma, detailed for one month's Military training.

.. Amar Das Kohli, General Duty, Punjab Dental Hospital, Lahore, to Nainakot Dispensary, Gurdaspur District, Vice Dr. Ghulam Ali Soofi detailed for one month's Military training.

.. Manohar Lal Kaisth, On return from leave, to General Duty, Civil Hospital, Mianwali.

.. Ram Ditta Kapur, General Duty, Civil Hospital, Sheikhupura, to New Central Jail, Multan, Vice Dr. Anant Ram Luthera, granted 12 months leave.

.. Labhu Ram, Dinga Dispensary, Gujrat District, to General Duty, Civil Hospital, Gujrat.

.. Tej Bhan. Granted 4 months extension of leave.

.. Farangi Ram, Reformatory Settlement Dispensary, Amritsar, to Neurmahal dispensary, Jullundur District, Vice 2nd Class Senior Dr. Chandan Lal who retired from service.

.. Chuhar Singh, General Duty, Civil Hospital, Jullundur, to Dusehra Cattle Fair, Jullundur.

.. Chuhar Singh, Dusehra Cattle Fair, Jullundur, to General Duty, Civil Hospital, Jullundur.

.. Panna Lal Khanna, Granted one month's extension of privilege leave.

.. Nanak Chand Lakhnupal, General Duty, Civil Hospital, Sargodha, to Canal Dispensary, Khanki, Gujranwala District, Vice Dr. Mir Muhammad Riaz, L.T.M. (Cal.) proceeded on one month's Military training.

.. Makhan Singh, On return from leave, to Canal Dispensary, Wer, Jhang District.

.. Siraj-ud-Din Ahmed, Canal Dispensary, Wer, Jhang District, to General Duty, Civil Hospital, Jhang.

.. Saleh Muhammad, General Duty, Civil Hospital, Sargodha, to Canal Dispensary, Naiwala, Montgomery District, Vice Dr. Ishar Das proceeded on 1½ months leave.

.. Basheswar Nath, On return from leave, to Dharmkot Dispensary, Ferozepore District.

.. Manohar Lal Kaisth, General Duty, Civil Hospital, Mianwali, to Police Hospital, Campbellpur, Vice Dr. Ram Chand Dhipar proceeded on one month's Military training.

.. Kalyan Singh Makhania, D.T.M. (Cal.), General Duty, Civil Hospital, Gurgaon, to City Branch Dispensary, Gujranwala, Vice 2nd class Senior Doctor Muhammad Sharif proceeded on 85 days leave.

.. Behari Lal Khera, 1st Class Senior, On return from leave, to Majitha Dispensary, Amritsar District.

.. Ghulam Muhammad, Majitha Dispensary, Amritsar District, to Attari Dispensary in the same District.

.. Nanak Singh Saigal, Attari Dispensary, Amritsar District, to Junior House Surgeon, Indian Private and Family Wards, Mayo Hospital, Lahore.

.. Ram Lal Malak, 1st Class Senior, On return from leave, to City Branch Dispensary, Sialkot.

.. Diwan Chand Chopra, City Branch Dispensary, Sialkot, to General Duty, Civil Hospital, Sialkot.

.. Diwan Chand Chopra, General Duty, Civil Hospital, Sialkot, to Zaffarwal Dispensary, Sialkot District.

.. Siraj-ud-Din Ahmed, General Duty, Civil Hospital, Jhang, to New Central Jail, Multan, Vice Dr. Ram Narain proceeded on one month's Military training.

.. Dalip Singh, On return from leave, to Manjhaoli Dispensary, Gurgaon District.

.. Kidar Nath Datt, L.T.M. (Cal). L.O. (Mad), Manjhaoli Dispensary, Gurgaon District, to General Duty, Civil Hospital, Gurgaon.

.. Baij Nath Murghai, General Duty, Civil Hospital, Gurgaon, to Sutlej Valley Project Dispensary, Sheikh Fazal, Montgomery District.

.. Ali Hassan, Anaesthetist, Civil Hospital, Amritsar, to Reformatory Settlement Dispensary, Amritsar.

.. Fateh Chand, 1st class Senior, On return from leave, to Police Hospital, Ferozepore.

.. Parmeswar Singh Sodhi, Police Hospital, Ferozepore, to General Duty, Civil Hospital, Ferozepore.

.. Amar Singh Grewal, General Duty, Civil Hospital, Ambala, to Canal Dispensary, Tajewala, Ambala District.

.. Karm Singh, On reversion from the N. W. Railway, to General Duty, Civil Hospital, Gujranwala.

.. Faqir Chand, On return from leave, to General Duty, Civil Hospital, Ludhiana.

.. Faqir Chand, General Duty, Civil Hospital, Ludhiana, to Jail and Police Hospitals, Jhang, Vice Dr. Muhammad Hussain granted 4 months leave.

.. Ram Narain, New Central Jail, Multan, to Indian Military Hospital, Multan Cantonment, For one month's Military training.

.. Tola Ram, General Duty, Civil Dispensary, Lahore, to General Duty, Punjab Dental Hospital, Lahore.

Dr. Chuhar Singh, General Duty, Civil Hospital, Jullundur, to Canal Dispensary, Bainsi, Rohtak District, Vice 2nd Class Senior Dr. Shadhi Ram proceeded on 2 months leave.

.. Udho Das, On expiry of leave, to General Duty, Civil Hospital, Multan.

.. Sidh Das, Granted one month's extension of leave.

.. Kidar Nath Datt, L.T.M. (Cal). L.O. (Madras), General Duty, Civil Hospital, Gurgaon, to Police and Sub-Jail Hospitals, Gurgaon.

.. Ram Gopal Bhatla, General Duty, Civil Hospital, Jhelum, to Police and Sub-Jail Hospital, Sheikhupura.

.. Beli Ram Jain, Police and Sub-Jail Hospitals, Sheikhupura, to General Duty, Civil Hospital, Kulu, Kangra District.

.. Beli Ram Jain, General Duty, Civil Hospital, Kulu, Kangra District, to Keylang Dispensary in the same district.

.. Ambu Lal Sharma, Keylang Dispensary, Langra District, to General Duty, Civil Hospital, Kulu, in the same district.

List of P.S.M.S. officers (U.P.) transferred and granted leave during the months of July, August and September 1935

Dr. Sidh Nath Sharma, Res. Fyzabad, to J. and P. Pilibhit.

.. Ali Abdulla Jafri, J. and P, Pilibhit, to Hasanganj, Unao.

.. Syed Ahmad Khan, Hasanganj, Unao, to Res. Lucknow.

.. Murli Manohar Narain Mathur, Jail, Sultanpur, to J. and P. Unao.

.. Murli Manohar Agarwal, J. and P. Unao, to C. Jail, Agra.

.. Pooran Chand Sharma, C. J. Agra, to Moth, Jhansi.

.. Hafeez Ahmad Lari on expiry of Leave, to Res. Bareilly.

.. Daya Nand Misra on expiry of Leave, to Mahsi, Bahraich.

.. Ram Dass Bhatia, Mahsi, Bahraich, to J. and P. Gonda.

.. Sunder Lal Agarwal, J. and P. Gonda, to Res. Gonda.

.. Amar Singh, Res. Etah, to Mental Hospital, Agra.

.. Bishambher Nath Kapoor, Res. Jhansi, to Hewett, Dehra Dun.

.. S. Ahmad Khan, Res. Lucknow, to Jalalpur, Fyzabad.

.. Zaheer Hasan Naqvi, Jalalpur, Fyzabad, to Zaidpur, Bara Banki.

.. Lall Bahadur, Res. Bareilly, to Police Hspl. Agra.

.. Rikhab Chand, Police Hspl. Agra, to Kunwarpur, Sitapur.

Dr. Mohd. Yar Khan, on expiry of Leave, to Karchana, Allahabad.

.. Jai Narain Mathur, Karchana, Allahabad, to Res. Allahabad.

.. Parmanand Joshi, Res. Hamirpur, to Katra, Shahjahanpur.

.. Rasik Behari Lal, Katra, Shahjahanpur, to Res. Shahjahanpur.

.. Singh, Res. Bijnor, to Mankapur, Gonda.

.. Ram Chandra Saxena on expiry of Leave, to Misrikh, Sitapur.

.. Kanbaya Lal Sharma, Misrikh, Sitapur, to Res. Sitapur.

.. S. Zahid Ali, Res. Lucknow, to Khair, Aligarh.

.. Ajodhia Prasad, Khair, Aligarh, to Res. Aligarh.

.. Behari Lal Vaish on expiry of Leave, to J. and P., Fyzabad.

.. Rai Ghanshyam Saroop, J. and P. Fyzabad, to Res. Fyzabad.

.. Chandra Sharma on expiry of Leave, to Salone, Rae Bareilly.

.. Jagan Nath Prasad, Salone Bareilly, to Res. Bareilly.

Dr. M. C. Chatterji, Kunda, Partabgarh, to Patti, Partabgarh.

.. Bindeshweri Singh, Patti, Partabgarh, to Kunda, Partabgarh.

.. Ambika Prasad Dube on expiry of Leave, to Gursarai, Jhansi.

.. Brij Nandan Sahai, Jhansi, to Khalilabad, Basti.

.. Jai Narain Mathur, Karchana, Allahabad, to Sub-charge, Gorakhpur.

.. Satgur Dayal, Sub-charge Gorakhpur to Jalesar, Etah.

.. Rasik Behari Lal, Res. Shahjahanpur, to Res. Bareilly.

.. Abdul Hai, Res. Lucknow, to Safipur, Unao.

.. Abdul Ghaffoor, Safipur Unao, to Nawabganj, Bareilly.

.. Brij Basi Lal, Nawabganj, Bareilly, to Mankapur Gonda.

.. Krishn Adhar Singh, Mankapur Gonda, to Maharajganj, Gorakhpur.

.. Har Gopal Mathur, Maharajganj, Gorakhpur, to Res. Benares.

.. S. Murad Ali, Res. Bareilly, to Sub-charge Fyzabad.

.. Rai Ghanshyam Sarup, Res. Fyzabad, to Chirgaon, Jhansi.

.. Sunder Lal Agarwal, Res. Gonda, to J and P Shahjahanpur.

.. Jamil Ahmad Khan, J and P, Shahjahanpur, to Res. Shahjahanpur.

.. Dalpat Singh on expiry of Leave, to J and P Pilibhit.

.. Sidh Nath Sharma, J and P, Pilibhit, to Res. Bareilly.

Dr. Kanhaiya Lal Sharma, Res. Sitapur, to J and P. Aligarh.
 „ Azizul Hamid, J and P Aligarh, to Baghpat, Meerut.
 „ K. S. Dr. Abdul Majid Khan, Baghpat, Meerut to Shahabad, Hardoi.
 „ K. S. Dr. Babu Prasad Gupata, Shahabad, Hardoi, to Res. Meerut.
 „ Bhawani Dass Sah, Pithoragarh, Almora, to J and P, Dehra Dun.
 „ Prahlad Dass Gupta, J and P., Dehra Dun, to Pithoragarh, Almora.
 „ Janki Prasad, Under suspension to Res. Agra.
 „ Janki Prasad, Res. Agra, to J and P. Banda.
 „ Joti Swarup Tewari on expiry of Leave, to Nawabganj, Gonda.
 „ R. S. Dr. Prushotam Dass Chaturvedi, Nawabganj, Gonda, to Bhelupur, Benares.
 „ Jamil Ahmad Khan, Res. Shahjahanpur, to Police Hopt., Lalitpur, Jhansi.
 „ Jaganath Prasad, Res. Rae Bareilly, to Kalsia Canal, Saharanpur.
 „ Mohd. Habibuddin Khan, Kalsi Canal Saharanpur, to Sherkot, Bijnor.
 „ Ram Sarup Garg, Sherkot, Bijnor, to Ramnagar, Naini Tal.
 „ Rasik Behari Lal, Res. Bareilly, to J and P. Fatehpur.
 „ Raghunath Dass, J and P, Fatehpur, to D. Jail, Bareilly.
 „ Kameshwar Nath Johri, D. Jail, Bareilly, to Res. Bareilly.
 Dr. Sher Singh on expiry of Leave, to Anupshahr, Bulandshahr.
 „ Ram Charan Lal, Anupshahr, Bulandshahr, to Tajganj, Agra.
 „ Hamid Husain Khan, Tajganj, Agra, Retires.
 „ Sidh Nath Sharma, Res. Bareilly, to D. J. Lucknow.
 „ Shiv Dayal Agnihotri on expiry of Leave, to Sujauli, Bahraich.
 „ S. C. Sen Gupta, Sujauli, Bahraich, to Bella Harria, Gorakhpur.
 „ Ram Chandra II, Bella Harria, Gorakhpur, to Res. Gorakhpur.
 „ Har Gopal Mathur, Maharnjanj, Gorakhpur, to J. & P. Pilibhit.
 „ Dalpat Singh, J. & P. Pilibhit, Retires.
 „ Lachman Prasad, D. Jail, Moradabad, Leave 4 months A. P., 1 yr. 8 mths. $\frac{1}{2}$ A. P.
 „ Joti Swarup Tewari, Bhelupur, Benares, Leave 1 month 28 days A. P.
 „ Gaya Prasad Bharadwaj, M. Hopt., Agra, Leave 8 months A. P., M: C., Leave 1 month $\frac{1}{2}$ A. P. M. C.
 „ Har Sahai, Sub-charge, Fyzabad, leave 6 months A. P.
 „ Ganga Prasad Nigam, Sikandra Rao dispy., Aligarh, 1 month A. P. Leave.
 „ Mohd. Ekram Husain, Zaidpur, B. Banki, Leave 6 months A. P.

Dr. Sher Singh, Res. Bijnor, Leave 1 month A.P.
 „ Anand Behari Lal, Endlaw Jaleser, Etab Leave 4 months A. P.
 „ Balak Ram Negi, Res. Naini Tal, Leave 8 months A. P.
 „ Durga Prasad, J. & P. Banda, Leave 2 months A. P.
 „ Brij Nandan Sahai, Gursarai, Jhansi, Leave 21 days A. P.
 „ Jagdish Lal Jagota, Chirgaon, Jhansi, Leave 27 days A. P., 27 days $\frac{1}{2}$ A. P.
 „ Lal Mohan Nath, Lalitpur Police Hopt., Jhansi, Leave 4 months A. P.
 „ Bai Sahib Dr. Babu, Prasad Gupta, Res. Meerut, Leave 2 months A. P.
 „ Ali Abdulla Jafri, Hasanganj, Unao, Leave 80 days A. P.
 „ Bhagwati Sahai, D. Jail, Lucknow, Leave 2 months A. P.
 „ Lal Bahadur Saxena, Khatima, Naini Tal Leave 2 month A. P.
 „ Adwaita Nand Deva, Maurawan Unao, Leave 1 month A. P.

List of Transfers, Posting and leave of Sub-Assistant Surgeons of Assam Medical Service, Junior, During the Month of November 1935

Thro' the Courtesy of Dr. S. C. Barooch

Dr. Dakshina Ranjan Sen, From Supy. duty. Tezpur, to Column duty with the Political officer. B. F. Tract from 1-10-35.
 „ Jagadish Chandra Banerji, From Dergoon Dispensary (Sibsagar) to Dibrugarh, Supy. duty.
 „ Sambhu Nath Datta, From Supy. duty. Jorhat to Dergoon Dispensary, (Sibsagar).
 „ Kumud Chandra Nundy, From Jaljaly Dispensary (Durrang) to Supy. duty. Tezpur.
 „ Surendra Chandra Deb, From P. H. Department to Supy. duty, Sylhet.
 „ Ramesh Chandra Kar, From Supy. duty. Sylhet to Karimganj Dispensary, (Temporary).
 „ Monoranjan Das Gupta, (S. grade), From Karimganj Dispensary, leave one month.
 „ Prakash Chandra Mazumdar, From leave to Bogribari Dispensary, (Goalpara) Temporary.
 „ Asotosh De Purkayastha, From Bagribari Dispensary, leave two months.
 „ Jitendra Nath Chakrabarty, From Supy. duty, Tezpur to Supy. duty Sadiya F. Tract.
 „ Shasanka Sekher Dhar, From Supy. duty. Gauhati to Mornai Dispensary, (Goalpara).
 „ Haran Chandra Das Gupta, From Mornai Dispensary, leave four months.
 „ Upendra Chandra Palit, From Supy. duty. Sylhet to Maulavibazar Dispensary. (Sylhet).
 „ Anukul Chandra Das Gupta, From Maulavibazar, leave four months.
 „ Sarada Chandra Chakraborty, From leave to Supy. duty, Sylhet.
 „ Sambhu Nath Dotta, Supy. duty, Jorhat, to leave four months.
 „ Upendra Chandra Palit, From Supy. duty. Sylhet to Sunamgunj Dispensary, Sylhet.
 „ Jnanendra Chandra Mukerji, From leave to Sylhet, Supy., duty.

Dr. Bipra Charan Gupta. (S. Grade), From Chattak Dispensary, Sylhet, to leave four months.
 „ Maheswar Bordoloi, From P. H. Department to Supy., duty, Kamrup, from 4-10-35.
 „ Surendra Chandra Purkayasta, From leave to Nonoi Dispensary, (Nowgong).
 „ Surendra Mohan Hazarika, From Nonoi Dispensary, to leave three months.
 „ Banshidar Bora, From leave to Lungleh Dispensary, Lushai Hills.
 „ Ketaki Ranjan Chakraborty, From Lungleh Dispensary to Gauhati Supy., duty.
 „ Sotri Mohan Deingdoh, From leave to Nongtalang Dispensary (Khasi and Jaintia Hills).
 „ Sashi Mohan Pal, From Nongtalang to Dhubri Supy., duty.
 „ Rohini Kumar Bhattacharji, From Aizal (Garro Hills) to leave two months.
 „ Bhini Karna Rai, From Supy., duty Imphal, (Monipur) to Mokokchang Dispy. (Tem), Naga hill.
 „ Khosa, From Mokokchang to leave four months.
 „ Hirendra Chandra Endow, Supy. duty Silchar to Supy., duty Sylhet.
 „ Sarat Chandra Barooah, Civil Hospital, Gauhati to leave three weeks from 9-11-35.
 „ Rash Behari Deb, Supy., duty Gauhati to the Civil-Hospital, Gauhati. (Temp).
 „ Rash Behari Deb, From Civil Hospital Gauhati to Supy., duty, Gauhati.
 „ Rash Behari Deb, From Supy., duty Gauhati to Supy., duty, Tezpur.

Dr. Maheswar Bardoloi, Services placed at the disposal of I.G.C.H. Assam from 4-10-35.
 „ Surendra Chandra Chakraborty, Leave extension for one month.
 „ Chapfho Angami, From Fulbari to Tura, (Garro Hills).
 „ Sashindra Dutta, Leave for two months.
 „ Kameswar Hazarika, Leave fore three months.
 „ Azizul Rahman Borbora, Sibsagar District, Leave for 15 days.
 „ Gopi Raman Bhattacharjee, Shillong to Jagodishpur, Sylhet.
 „ Ayodhya Nath Bhattacharjee, Shillong to Nowgong.

Quetta Relief Fund

	Rs.	As.	Ps.
Dr. S. Z. H. Naqui, Jalalpur	6	0	0
„ P. L. Jaini, Benares	4	0	0
„ R. C. Prosad, Chapra	6	0	0
	16	0	0
Previous donations vide I. M. J. Vol. XXIX P. 670	508	10	0
Total	524	10	0

CONSOLIDATED ACCOUNTS OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION

RECEIPTS

	Rs.	As.	Ps.
SEPTEMBER 1935			
To Subscription (old & new) ...	397	7	—
„ Advertisement ...	930	—	10
„ Interest ...	360	3	9
„ Miscellaneous ...	33	3	—
„ Loan by Gen. Secy. ...	8	3	9
Total ...	1,729	2	4
Balance from last month ...	38,899	12	8
Grand Total ...	40,628	15	—
Detail of Balances			
New Loans 8 $\frac{1}{2}$ % 1947-50 ...	13,200	—	—
5 Years Postal Cash Certificates ...	10,261	14	—
G. P. Notes ...	500	—	—
Government Security Loans ...	10,600	—	—
8 $\frac{1}{2}$ % Treasury Bonds ...	1,199	—	1
With Dr. S. P. Sen Gupta, Ex-Manager ...	216	11	9
Postal Savings Bank, Mussoorie ...	581	15	11
With Branches ...	—	—	—
With Managing Editor, Madras ...	5	1	9
In hand ...	1415	7	1
In Bank ...	—	—	—
Cheques ...	—	—	—
With Gen. Secy.—In hand ...	—	—	—
In Bank ...	5	—	—
With Treasurer.—In hand ...	43	—	—
In P.N. Bank ...	128	11	2
In P.S. Bank ...	186	—	—
Total ...	38,342	13	9

PAYMENTS

	Rs.	As.	Ps.
By Printing I. M. J. ...	1,117	5	6
„ Establishment ...	347	—	—
„ Office Rent ...	70	—	—
„ Stationery ...	7	14	9
„ Travelling allowance ...	134	4	—
„ Postage etc. ...	228	14	9
„ Miscellaneous ...	111	7	—
„ Other Printing ...	47	12	—
„ Propaganda Work ...	—	—	—
„ Expenses for Branches ...	137	7	6
„ Furniture ...	—	—	—
„ Audit fee ...	—	—	—
„ Refund of loan to Gen. Secy. ...	83	15	9
Total ...	2,286	1	3
Balance in hand ...	38,342	13	9
Grand Total ...	40,628	15	—

RECEIPTS

OCTOBER 1935				PAYMENTS			
	Rs.	As.	Ps.		Rs.	As.	Ps.
To Subscription (old & new) ...	786	—	—	By Printing I. M. J. ...	598	1	3
„ Advertisement ...	729	9	4	„ Establishment ...	325	—	—
„ Advance by office bearers... ..	—	—	—	„ Office Rent ...	60	—	—
„ Miscellaneous ...	17	15	9	„ Stationary ...	12	14	—
Total ...	1,533	9	1	„ Travelling allowance ...	102	—	—
Balance from last month ...	38,342	13	9	„ Postage etc. ...	219	12	8
Grand Total ...	39,876	6	10	„ Miscellaneous ...	72	12	6
Detail of balances				„ Other Printing ...	—	—	—
New Loans Govt. Security Loans ...	10,600	—	—	„ Propaganda Work ...	—	—	—
5 Years Postal Cash Certificates ...	10,261	14	—	„ Expenses for Branches ...	45	9	—
G. P. Notes ...	500	—	—	„ Furniture ...	—	—	—
Govt. Security Loans 3½% 1947-50 ...	18,200	—	—	„ Audit fee ...	—	—	—
With Dr. S. P. Sen Gupta Ex-Manager ...	1,199	—	1	„ Refund of loan to Gen. Secy. ...	8	3	9
Postal Savings Bank, Mussoorie ...	146	11	9	Total ...	1,444	4	9
With Branches ...	580	7	5	Balance in hand ...	38,482	2	1
With Manager :—				Grand Total ...	39,876	6	10
In hand ...	10	9	—				
In Bank ...	1,187	9	6				
Cheques ...	—	—	—				
With Gen. Secy :—							
In hand ...	35	—	9				
In Bank ...	218	5	8				
With Treasurer :—							
In hand ...	47	—	9				
In P. N. Bank ...	189	7	2				
In P. S. Bank ...	306	—	—				
Total ...	492	7	11				
Total ...	38,482	2	1				

(Sd.) N. R. KARANDIKAR,
Chairman, Finance Committee.

(Sd.) A. N. KHOSLA,
Hony. Treasurer.

(Sd.) U. B. NARAYAN RAO,
General Secretary.

LIST OF PROPERTIES OF THE A. I. M. L. A. WITH THE DIFFERENT OFFICE-BEARERS OF THE ASSOCIATION AS ON 30—9—35

No. of Articles	Description and date of purchase	Purchase Value (A)	Present Value (P)
President			
2 Tin Treys	...	2 0 0 (A)	
1 Punching Machine	...	0 12 0	
2 Clips	...	0 4 0	
Total (A) ...		8 0 0	
Treasurer			
1 Punching Machine, 1929	...	0 12 0	
6 Trunks, G. I., 22-11-29; 14-4-30; 12-11-34; 20-4-35 Size 28"	...	16 0 0	
1 Typewriter, 15-4-30, Remington No. 12, C. No. 2209254	...	855 0 0	
1 Seal Brass H.T.O., 19-12-30	...	0 14 0	
16 Rubber Stamps, 1930—1935...	...	11 2 0	
1 Writing Table, 12-1-1931 4' x 2½ two drawers	...	15 0 0	

1 Small Table, 24" x 19"	...	4 0 0	
2 Office chairs 12-1-31, Cane bottom	...	11 0 0	
1 Armless Chair do.	...	4 0 0	
1 Wooden Almirah 4' x 2½' wooden panelled doors, 12-1-31	...	19 0 0	
1 Pen Rack, 14-1-1931	...	0 6 0	
2 Iron Paper Weights, 28-1-31...	...	0 8 0	
1 Wooden Ruler, 27-1-31	...	0 10 0	
1 Bod Kin. (Pricker), 9-2-31	...	0 8 0	
1 Iron Stamp Stand, 7-10-31	...	2 0 0	
1 Dictionary Anandale, 8-8-32...	...	4 8 0	
1 Penknife Double blade, 21-9-33	...	1 12 0	
1 Letter Balance, 21-9-33	...	2 8 0	
1 Table Lamp Hicks, 24-10-33	...	4 0 0	
1 Table Cloth Flannel, 26-1-34 6' for office table	...	8 0 0	
1 Sponge Pot, 26-10-34	...	0 12 0	
1 Pin Cushion, do.	...	0 8 0	
1 Table Cloth, 12-4-35 for small table	...	0 10 0	
8 Locks 19-5-33	...	2 4 0	
Total (A) ...		460 5 0	

Managing Editor, I. M. Journal

	Rs.	As.	Ps.
1 Typewriter Table (small) date not known	5	0	0 (P)

1 Underwood Typewriter No. 4114202-10, date not known.	250	0	0	..
17 Rubber Stamps Reed. from Calcutta office, date not known	Nil.			
1 Pin Cushion, 7-6-35	0	8	0 (A)	
1 Date Stamp, do.	0	7	0	..
6 Rubber Stamps & 1 two line stamps 29-6-35	3	8	0	..
1 Ink Stand 2-7-35	1	6	0	..
½ Doz. Paper clips big size 9-7-35.	0	13	0	..
½ Doz. Paper clips small do....	0	3	0	..
2 One line Rubber Stamps, 27-7-35	0	12	0	..
6 Paper Clips, 9-8-35	0	13	0	..
150 Library Books, (Review copies)	50	0	0	P
Total (P) ...	305	0	0	

General Secretary's Office

	Rs.	A.	P.	A
1 Underwood Typewriter No. 752938-14, 19-8-28	339	8	0	..
1 Square Table for the above 30", February, '34	8	0	0	..
1 Almirah with wooden doors 72" x 48" (5 shelves). February '34	35	0	0	..
1 Almirah with glass panes (5 shelves) 66" x 36" Febru- ary, '34	40	0	0	..
1 Writing table (8 shelves) 35" x 20", February '34	14	8	0	..
3 Folding wooden seated chairs, February '34	7	8	0	..
1 Almirah (5 shelves, glass panes) 72" x 36" June, '35	25	0	0	..
1 Greif Duplicator, No. 4343 Rapid, 18" x 11" x 12", May 1935	160	0	0	..
1 Wire Tray of the above, May, 1935				
1 Wooden Board of the above ...	0	8	0	..
2 Paper Weights Glass, Feb. '34.	1	4	0	..
1 Paper tray wooden, do. ...	1	4	0	..
1 Inkstand having 8 pots, Feb. '34	1	4	0	..
1 Punching Machine	0	8	0	..
2 Pin cushions do.	0	4	0	..
2 Stamp pads (one useless), Jan. '35	0	6	0	..
3 Seals, March 34	1	8	0	..
1 Penknife, Feb. 1934	1	0	0	..
Total (A) ...	636	2	0	..

Finance Committee

1 Stamp Pad			
6 Rubber Stamps			
1 Letter Basket (wire)			
1 Punching Machine (useless)	All very old and useless excepting rubber stamps and letter basket.		
1 Steel trunk 28" x 15" all broken			

1 Stamp holder (iron)
1 Woodstock Typewriter (unserviceable)
2 Locks small

Provincial Secretary, Bengal

1 Rack 2' 8" x 6' x 1' 11"
1 Hanging shelf, 10' 6" x 8'
1 Table 5' 6" x 3' 4" x 2' 4"
1 Glass case almirah 6' x 3'
1 Wooden panelled almirah 5½' x 3½'
2 Rack 4' x 5'
1 Racks 2' 4" x 1' 6"
1 *Remington Typewriter, brief size
1 *Leather suit case
4 Rubber stamps
1 Pad

* These Items belong to the Provincial Fund.

N.B.—The articles with the branches will be published later on.

Association Notes

(Branch proceedings should be sent to us for publication through the General Secretary only. Ed. I.M.J.)

A summary of correspondence received by the General Secretary in reply to the following resolutions passed at the last Indore Conference of the A.I.M.L.A.

Resolution No. 2. To the I.G.C.H., U.P. Only acknowledgment.

Resolution No. 3. To the Secretary to the Govt. of U.P. Only acknowledgment.

Resolution No. 6 to 12 and 14. To the Secretary to the Govt. of India. Only acknowledgment.

Resolution No. 13 and 16. To the Secretary to the Govt. of Assam, Bengal, Bombay, B. & O., Burma, C. P., Madras, N.W.F.P., Punjab and U.P., and to Political Agent, Central India Agency, Indore. Only the first three acknowledged.

Resolution No. 15. Sent to all the Surgeons-General. Only the following replied.—Madras: there is no professional examination to the Sub-Assistant Surgeons in the Medical Department of this Presidency.

Assam.—the quadrennial professional examinations of S.A. Surgeons are not in vogue in this Province.

U.P.—the question of substituting the Post-Graduate Course for the departmental promotion of the P.S.M.S. Officers cannot be considered at present. The scheme must wait for better financial times.

The Senior Surgeon of Mysore.—no quadrennial examinations are held in the Mysore State. The Sub-Assistant Surgeons are required to pass only one examination prior to their promotion to Rs. 90/-.

Other have not yet replied.

Resolution No. 7. Sent to all members of the Legislative Assembly; to all the members of the Indian Medical Council and to the Presidents of all the Provincial Medical Councils.

Drs. T. S. S. Rajan, Trichinopoly and N. B. Khare, and Mr. Shree Prakash, Members of the Legislative Assembly, have expressed their sympathies and have promised to help us.

Surgeon-General with the Govt. of Madras, President of the Madras Medical Council, President of the B. & O. Medical Council, have only acknowledged.

Surgeon-General with the Govt. of Bengal*, in addition to acknowledging the resolution, has also asked for the draft of the portion of the Act, which is required to be amended ("He is a member of the Indian Medical Council and also the President of the Bengal Medical Council.").

Resolution No. 7. The Burma Medical Council in reply states that the Council has resolved that "In view of the impending constitutional changes in Burma, no action be taken by the Council on this matter."

The President of the Indian Medical Council has only acknowledged the receipt of the resolution.

Dr. C. L. Houlton, Member of the Indian Medical Council, being on leave, it was acknowledged by the Offg. Principal of the Lady Hardinge Medical College, New Delhi.

R. B. Dr. D. D. Pandya and Dr. B. C. Roy, members of the Indian Medical Council, have expressed their sympathies and have promised to help in the matter.

No replies were received from the rest.

Resolution No. 17. To the Indian Medical Association, no reply.

Resolution No. 18. Some of the companies have replied and they will be circulated to all the Branches.

Resolution No. 19. To the Registrar, University of Madras, No reply.

Copy of a letter dated 11-11-35 from Dr. G. K. Kulkarni, Provincial Secretary, Central Province, to the President, A.I.M.L.A.

As it has been brought to my knowledge that the proposer of my name for the office of the Provincial Secretary for C. P., and Berar was an unconstitutionally elected delegate for the Indore Conference and that the seconder had no instruction to second my name from his branch, I believe I cannot continue in good-faith holding office of the Provincial Secretary. I tender my resignation of the office I hold.

Proceedings of the Standing Committee of the U.P. Branch of the A.I.M.L.A., held at Lucknow

*His resignation has since been accepted by the standing Committee and Dr. K. P. Sengupta has been elected in his place.

on the 11th October, 1935 at the residence of Dr. A. D. Bhandari. 17 members and 3 non-members were present.

The following resolutions were discussed and passed:—

Resolution No. 1. Resolved that the agitation against the amended Poisons Rules passed in 1935, vide G. O. No. 1000 VI-1776—1930 dated the 15th April, 1935, be vigorously carried on till they are totally withdrawn. It was moved by Rai Sahab Dr. R. N. Lal, and seconded by Dr. Kunj Behari Lal Varma. Passed unanimously.

Resolution No. 2. Resolved that the next Provincial Conference be held at Lucknow and that Rs. 250 be sanctioned towards the expenses of the same.

Resolution No. 3. Resolved that the next All-India Conference of the Association be invited to U. P. and be held at Agra.

Resolution No. 4. Amendments suggested by the U.P. Standing Committee to the New Rules of the A.I.M.L.A. (See Notice Column.)

Resolution No. 5. Dr. J. R. Goyal's letter regarding the last election to the State Medical Faculty, Dr. S. L. Sharma's propaganda in connection thereof, and Dr. Sharma's letter in the "Hindustan Times" regarding the Poisons Rules passed by the U.P. Government were read, discussed and recorded.

Resolution No. 6. Dr. Begam Abdul Gaffoor's letter on the subject of the election to the State Medical Faculty was read and filed after the facts had been laid before the Committee by the Secretary

Resolution No. 7. The rules for the election of the members on behalf of this Association to the State Medical Faculty be drafted by Rai Sahab Dr. R. N. Lal, and be sent to the Provincial Secretary for circulation amongst the members of the Standing Committee.

Resolution No. 8. Post of the Lecturer of Pharmacology at Agra Medical School: the President is asked to enquire into the matter and take necessary action.

Resolution No. 9. That the quarters provided at the jails in these Provinces for the P.S.M.S. Officers are very small and inconvenient, and are not in accordance with the Standard plan. The Inspector-General of Prisons be, therefore, requested to move the Local Government to take early steps to provide suitable quarters, and remove this long-standing

The General Secretary, A.I.M.L.A. wires to His Excellency the Viceroy under date 23-1-36:

All-India Medical Licentiates' Association begs to express profound grief at the death of His Majesty and requests you to convey its respectful condolences to the Royal family.

Reply:

I am directed by His Excellency the Viceroy to thank you for message of condolence on the death of His Majesty The King Emperor. His Excellency much appreciates your sympathy on this sad occasion.

grievance and that the other Jail-service grievances be discussed in the next Provincial Conference.

Resolution No. 10. Deficit of the last Provincial Conference held at Gorakhpur.—Resolved that the resolution of the last Standing Committee held at Agra on the 8th November be amended as follows.—That the words "after having been audited by the auditors" be deleted and the amount be passed for payment.

Resolution No. 11. A vote of thanks to the chair and also to Dr. A. D. Bhandari, who made excellent arrangements for the meeting of the standing committee, and who entertained the guests at breakfast and lunch, was passed.

Saharanpur Branch

Minutes of the adjourned meeting of Saharanpur Branch of All-India Medical Licentiates' Association, held at the residence of Dr. K. L. Endley on November 11, 1935:

6 members were present. Dr. Amba Prasad Sharma was in the chair.

Minutes of the last meeting of the Branch were read and confirmed; following business was transacted.

1. Resolved that the Saharanpur Branch of the Medical Licentiates' Association be re-organised and all the L. M. Ps. residing in the Saharanpur District be requested to become members of the Association.

2. Resolved that the Civil Surgeon, Saharanpur, be requested to become the patron of the District Branch.

3. Resolved that the Civil Surgeon be requested to allow the medical officers in charge of out-lying dispensaries in the District to leave their station to attend the meeting whenever it is called.

4. Resolved that the meetings be held once a month at the residence of the members by rotation and some scientific papers be arranged to be read by the members of the Association.

5. Resolved that, to defray the expenses of the Branch and to expand its activities, the members be requested to pay Rupee One as admission fee and annas eight per month as monthly subscription. It was agreed that a part-time peon be employed on an allowance of Rs. 2-0-0 per month to do the work of the Branch such as, to collect the subscription and circulate notices, etc.

6. Resolved that the following office-bearers be elected for the year 1935-36.

President: Dr. Kanhaiya Lal Endley; Vice-President: Dr. Barkat Ali; Hony. Secretary: Dr. I. N. Saxena; Joint Secretary: Dr. J. N. Vaish.

Members of the Working Committee.—

(1) Dr. Amba Prasad Sharma; (2) Dr. Ajodhya Prasad Mathur; (3) Dr. Bahadur Lal; (4) Dr. Mata Din Vaish; (5) Dr. Maqsood Husain.

7. Resolved that the Saharanpur Branch of the All-India Medical Licentiates' Association strongly

protests against and condemns the action of the Government in excluding the Medical Licentiates from the Indian Medical Council; and in joining hands with the organizers of 'The All-India Anti-Indian Medical Council Day', requests the M.L.As. to get the Act so amended as to include the Medical Licentiates of India within its purview.

8. Resolved that this Branch of the Medical Licentiates' Association reiterates its previous resolution passed in the meeting held on August 3, 1935 regarding poisonous drugs amendments and requests the Government to rescind the amendments forthwith.

9. Read Lucknow Provincial Conference Reception Committee Secretary's letter regarding the holding of the next Provincial Conference at Lucknow. Resolved that the attention of the Provincial Secretary and the Reception Committee be invited to the new rules of the Association regarding the election of the President for the next conference and the appointment of the provincial Office-bearers in future and that the rules be followed strictly and no violation should be allowed.

10. Read circular letters of Dr. A. Viswanathan, Managing Editor of the *Indian Medical Journal*, Madras. The members of the Branch be requested to send their scientific papers and contributions to the I.M.J. for publication, and help the cause of the Journal.

Further resolved that the efforts of the editor to improve the Journal are praise-worthy and his services be appreciated.

11. Resolved that the Government be requested to amend the G.O. in which unreasonable restrictions have been placed on the L.M.Ps. for appointment as Hony. Physicians and Surgeons in the State Hospitals and the I.G.C.H., U.P. be moved to give sympathetic consideration to this subject.

12. Resolved that the members of L.M.P. class should cultivate habit of fellow-feeling in social affairs and should help each other in times of need. They are also advised to inform their Branch Secretary at the time of need for necessary action.

Resolved that a copy of the above be circulated among all the members of the class in the District and be sent to those concerned for information.

The meeting dispersed with a hearty vote of thanks to Dr. Amba Prasad Sharma who conducted the business of the meeting.

Karnal Branch

The following resolutions were passed on 7-7-35 at a meeting of the above branch.

1. Resolved that the Karnal branch of the A.I.M.L.A., expresses its deep sorrow and horror at the misfortune of the people at Quetta and sympathises whole-heartedly with the sufferers and sends condolences to the bereaved families.

2. Resolved unanimously that the next Provincial Conference be invited to the Karnal District.

8. Also resolved that the Minister of Education be requested to preside over the Conference and in case he finds it impossible to find time, the Inspector General of Civil Hospitals, Punjab, be requested for the Presidentship.

4. Resolved unanimously that the Rural Medical Officers be requested to contribute Rs. 5/- and the Civil Sub-Assistant Surgeons Rs. 10/- each to meet the Conference expenses and send the amount to the Secretary, Karnal branch, soon.

Gauhati Branch

An extraordinary meeting of the Gauhati branch, A.I.M.L.A., was held in the premises of Dr. S. Barua at 7 P.M.* under the presidentship of Dr. R. Kar.

Doctors present:—1. R. M. Kar, 2. P. D. Hazarika, 3. Dr. U. Lahiri, 4. J. Bhattacharya, 5. C. R. Dutta, 6. Gogoi, 7. N. B. Das, 8. G. S. Das, 9. K. Mazumder, 10. S. Dhar, 11. M. Barah, 12. S. C. Baruah.

Resolutions. 1. Resolved that a deputation consisting of the following members should wait on the Civil Surgeon, Kamrup, to put up the grievances of the S.A.Ss., who worked on the recent Cholera Epidemic in the District of Kamrup:—Doctors 1. R. M. Kar, 2. S. C. Baruah, 3. G. S. Das.

2. Resolved that a sub-committee be formed with the following members to consider and draft a memorandum representing the grievances and a scheme for the amelioration of the same:—Doctors 1. U. Lahiri, 2. R. M. Kar, 3. S. C. Baruah, 4. G. S. Das.

3. In view of the fact that the S.A.Ss., of the Civil Dept., while deputed on Cholera duties suffer great financial loss, it is resolved that the authority be moved to accord sanction of special allowance of Rs. 50/- per month to these S.A.Ss., to enable them to compensate their loss.

4. In view of the fact that the Local Board doctors, while deputed on Epidemic duty, undergo that financial loss by incurring extra expenditure, it is resolved that the Chairman, Local Board, be moved to accord sanction of a special compensatory allowance of Rs. 40/-.

A meeting of the members of the above branch was held on 24-6-35 under the chairmanship of Dr. U. C. Lahiri in the Sadar Hospital premises, Gauhati.

Members present:—Doctors 1. L. C. Lahiri, 2. R. M. Kar by proxy, 3. R. C. Sen, 4. S. C. Baruah, 5. Sushil Dutta, 6. Lady Dr. H. Sienleigh, 7 Dr. G. S. Das, 8. Dr. K. Gogoi (from Goalpara) and Dr. H. Sarma (Non-member).

The minutes of the last meeting were read and confirmed.

The following resolutions were passed.

1. Resolved that the following delegates be elected for the 6th Annual Provincial Conference to be held at Dibrugarh from Gauhati branch:—Doctors 1. R. M. Kar—on his failure to go Dr. S. C. Baruah

will go as one of the delegates, 2. G. S. Das, Secretary, Gauhati branch, 3. U. C. Bardoloi or Dr. J. C. Medhi.

2. Resolved that the authorities be requested to designate the Doctor of the L. B. Dispensary as Medical Officer instead of L. Bd. Doctor which is not a happy expression at all.

3. In view of the hard nature of the work of the S. A. Ss., on Epidemic duty whose work is admittedly harder than those in charge of Dispensaries, and in view of the fact that they have to tour extensively and incur a consequent extra-expenditure, it is resolved that the authorities be requested to grant the S.A.Ss., on Epidemic duty a special daily allowance of Rs. 8/-

4. Resolved that Dr. R. M. Kar be requested to take up the work of Secretary for the period of his absence from Gauhati.

5. Resolved that the Executive Committee of the Gauhati Branch be newly formed with the following members, as 8 of the Executive members have been transferred to other places:—1. President, 2. Secretary, Doctors 3. R. M. Kar, 4. S. C. Baruah, 5. J. N. Roy, 6. S. C. Dutta, 7. R. C. Sen.

6. After perusal of the circulars from the General Secretary A.I.M.L.A., it is resolved that a fund be collected from the members and be sent to the Viceroy's Quetta Earthquake Relief Fund and Dr. G. S. Das and Dr. S. C. Dutta be requested to collect subscriptions for the same.

A special meeting of the above branch was held at 6-30 p.m. at the Civil Hospital, Gauhati with Dr. S. S. Dhar as Chairman.

Present: Doctors 1. R. M. Kar, 2. S. C. Baruah, 3. S. S. Dhar, 4. R. B. Deb, 5. G. C. Chaudhury (Sarnpeta), 6. B. C. Talukder (Boko), 7. G. S. Das (Proxy).

1. Resolved that the following doctors be enrolled as members of the Association.—Doctors 1. Gopal Chandra Chaudhury, P.H. Dept. Dispy., Sarnpeta (paid subscription), 2. Soshanka Sekhar Dhar, (paid subscription), 3. Rash Behari Deb (promised to pay subscription).

2. As, owing to heavy official pressure of work, Dr. R. M. Kar, the Offg. Secretary finds no time to run the office of this branch, it is resolved that Dr. S. C. Baruah be appointed as Offg. Secretary of the branch during the absence of the permanent Secretary Dr. G. S. Das.

3. Resolved that a circular be issued to all members of this branch for their opinion regarding holding of the Annual General Meeting of the Branch in September and for certain other points.

4. Resolved that the Offg. Secretary be authorised to submit all pending bills of the branch which could not be sent to the General Secretary up till now, as the Secretary was out of the station for over 6 months on Epidemic duty.

5. With a vote of thanks to the Chair the meeting terminated at 7.30 P.M.

*Date not mentioned. Ed. I.M.J.

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