

THE STABILITY OF "A. B." INSULIN IN THE TROPICS.

Copy of a letter from the British Drug Houses, Ltd., London to Messrs. Smith, Stanistreet & Co., Ltd., Calcutta; forwarded

To the Editor, THE INDIAN MEDICAL GAZETTE.

DEAR SIRs,—We have before us copy of letter and report of animal test with insulin received by you from the Pasteur Institute of Burma which has had our careful attention.

We also have before us press cuttings from the *Times of India* and other journals, reporting the findings of the Pasteur Institute of Burma and we reply to this as follows, and authorise you to make such use of our statement as you may think fit.

Although we consider that as a measure of prudence insulin should be stored at as low a temperature as possible, we believe the statement appearing in the Indian journals to the effect that English and American insulin is not resistant to tropical climatic conditions to be untrue so far as the English "A.B." brand of insulin is concerned.

In justification of our confidence we would mention that at the National Institute for Medical Research a batch of "A.B." brand insulin was heated to a temperature of 95° F. for one month, the activity of the insulin being accurately determined both before and after the treatment. The result of this careful test showed that "A.B." brand insulin had retained its activity without any detectable loss.

In the course of its manufacture "A.B." brand insulin is put through long and elaborate processes of purification, and this accounts for its stability. We know full well that without such careful purification insulin does lose its activity very rapidly under tropical conditions.

Without having before us further particulars of Major Taylor's experiments we are not justified in commenting upon the results he has obtained, but we do wish to say that we should regard a rabbit with blood sugar content of 0.21 per cent. as entirely unsuitable for use in testing insulin, for the reason that with such a high sugar content the liver of the animal would be likely to contain such a reserve of glycogen that no deduction could be made from the observed fall of the blood sugar after the administration of insulin, since the reserve glycogen would replace the sugar in the blood as quickly as the insulin removed it. The rabbit as prepared for test should, in our experience, have a blood sugar content of 0.10 per cent.

Ample evidence that "A.B." insulin retains its activity in tropical countries is afforded by the clinical reports of the numerous diabetic patients who have gained great advantage by its use.

We are now sending insulin to India in cold storage as a precaution and recommend that it be kept in stock at a low temperature, but we still maintain that in our opinion "A.B." brand of insulin may be used with safety in the tropics without risk of loss of activity.—Yours, etc.,

THE BRITISH DRUG HOUSES, LTD.

13th November, 1923.

[NOTE.—Since going to press, we have received two further communications with regard to this subject, which we hope to publish in full in our March issue. The first is from the British Drug Houses, Ltd., who write to say that certain samples of insulin, part of which had been tested in Calcutta by Dr. J. P. Bose, the Mitra Research Scholar on diabetes, at the Calcutta School of Tropical Medicine and whose potency appeared to have been reduced, were retested after having been returned to London. They were found to be as active as when despatched from London. The firm suggest that rabbits in India may possibly not react in the same way as rabbits in England.

Messrs. Burroughs Wellcome and Co., in forwarding two samples by post for test, claim that their brand will withstand boiling without loss of efficacy. These samples have been made over to Dr. Bose for trial.

We hope to publish both letters, together with any reports received on the samples in question in our next issue, and would also welcome any further evidence and information with regard to what is clearly a medical problem of considerable importance in India.—EDITOR, I. M. G.]

INTRAVENOUS IODINE.

To the Editor, THE INDIAN MEDICAL GAZETTE.

SIR,—As you have been good enough to publish my article on intravenous iodine in your December number, and to comment thereon, I should be obliged if you would find space to allow me to make a few remarks and corrections.

On page 563 under "Subsequent Injections" in the second paragraph, the word should read "hæmoglobinaemia" and not "hæmoglobinuria." I have never seen any trace of hæmoglobinuria and have looked for it in several cases when I commenced the treatment, as iodine is said to produce this condition.

I think therefore it may be assumed that patients can be given up to gr. II iodine in one dose free from risk. Secondly, as regards arthritis, as mentioned in your review, my results have been disappointing and patients have not remained sufficiently long under observation, but my cases were of the chronic rheumatic type and not of the acute type as seen by Dr. N. Kumara Menon.

Thirdly, as regards thrombosis: this is a complication which I have dealt with fairly fully and I do not consider there is any danger. As I have said, in over 1,000 injections—now about 1,500—I have only had two severe cases and both were adequately accounted for. The usual thrombosis is a very slight one but sufficient to block the vein for subsequent injection. This is a very important point, as in many cases veins are difficult to obtain for puncture and the blocking of the only available vein prevents further injections. This is why I have used an improved technique which is far more successful in preventing the condition.

As regards the alcohol in Tinct. Iodine I do not think it has any bearing on the cause of thrombosis. This idea occurred to me years ago and I disproved it by using watery solutions such as "solution B" and Nesfield's tablets. In all cases the incidence of thrombosis was about the same.

I feel sure that the real cause is an inflammation of the tunica intima of the vein set up by the irritant iodine projected on one spot.

Even if given slowly the fluid would impinge on the coat of the vessels and one has only to see a syringe emptied to recognise the force with which fluid is expelled through a fine needle on a single spot in the vein.

As regards the value of this treatment in malaria it is absolutely contra-indicated. If 1 c.c. of blood is mixed in a test tube with any quantity of iodine solution 1/10 (or any strength), it will be seen that there is an immediate heavy flocculent formation, which later, on standing becomes a deposit. If this deposit is examined under a microscope one only sees crenated red blood corpuscles, some pale not crenated and some normal; no mass of deposit is seen. This deposit can be filtered out and one would expect to find a large amount of material left on the filter paper. This is not the case. The deposit is red blood corpuscles with a certain amount of free hæmoglobin. Thus some destruction of red blood corpuscles is produced, which may be the cause of hæmoglobinæmia.

To apply this treatment to malaria, where there is an active agent producing destruction of red blood corpuscles already, is only likely to increase the trouble. Parasites will not be killed.

No, this form of treatment is only likely to benefit cases of acute and chronic suppuration where a leucocytosis can be produced to aid the body in dealing with bacteria by phagocytosis and avert the spread of inflammation.

Thus its great value in chronic ulcers, cellulitis, chronic bronchitis, septic lung and in the early stages of phthisis.

As regards the last named disease I hope to be able to give full details in a subsequent paper.—Yours, etc.,

W. W. JEUDWINE, M.D.,
Lieut.-Colonel, I. M. S.,
Civil Surgeon, Simla W.

14th December, 1923.

THE TECHNIQUE OF INTRAVENOUS INJECTIONS.

To the Editor, THE INDIAN MEDICAL GAZETTE.

SIR,—May I suggest an easy way of compressing the vessels in intravenous injections?

A broad piece of elastic—silk for choice as it wears longer—is put round the arm and drawn tight. Hold by a pair of Spencer Wells' forceps or a needle holder. The latter of course lets go on further compression. This method allows the operator to work without assistance and without fear of the needle coming out of the vein in the act of loosening the tourniquet.

Incidentally may I venture to hope that many others will test the intravenous injection of iodine and in even larger doses than Lieut.-Colonel Jeudwine reports in your issue of December 1923?—Yours, etc.,

F. J. W. PORTER,
Major, R. A. M. C. (retired.)

26, NEPEAN SEA ROAD,
MALABAR HILL, BOMBAY:
12th December, 1923.

THE INDIAN MEDICAL YEAR 1923. A CORRECTION.

To the Editor, THE INDIAN MEDICAL GAZETTE.

SIR,—I find in your survey of 1923 in the *Indian Medical Gazette* (January 1924) under venereal diseases that "Dr. C. F. Chenoy advocates bismuth in the treatment of syphilis, and gives for preference Neotrysol in doses up to 4 c.c. intravenously." I wish to draw your attention to the fact that I have used this drug up to now only *intramuscularly*.—Yours, etc.,

C. F. CHENOY,
Civil Surgeon, Raichur,
S. India.

11th January, 1924.

Service Notes.

APPOINTMENTS AND TRANSFERS.

THE Public Health Commissioner with the Government of India is appointed to be ex officio Director of Public Health for the Province of Delhi.

Lieut.-Colonel R. Kelsall, D.S.O., M.D., I.M.S., is to be Honorary Surgeon to H. E. the Viceroy, with effect from the 9th July 1923, *vice* Major-General C. H. Bowle Evans, C.M.G., C.B.E., M.B., I.M.S., appointed Honorary Physician to His Majesty the King-Emperor.

Lieut.-Colonel D. P. Goil, M.B., F.R.C.S.E., I.M.S., Civil Surgeon is transferred from Rajshahi to Howrah, with effect from the afternoon of the 22nd November 1923.

Major J. D. Sandes, M.D., I.M.S., is appointed to act as a Civil Surgeon and is posted to Rajshahi, with effect from the afternoon of the 20th November 1923.

Major A. H. Proctor, D.S.O., M.D., F.R.C.S.E., I.M.S., is appointed to do general duty at the Medical College Hospitals, Calcutta, with effect from the 30th October 1923.

Major F. B. Munro, O.B.E., M.B., I.M.S., is transferred from Burdwan to Midnapore.

Major M. J. Holgate, I.M.S., to act as Resident Surgeon, St. George's Hospital, Bombay, with effect from the 24th October 1923.

Captain J. D. L. Yule, M.B., I.M.S., is appointed to be Assistant to the Officer-in-Charge, Medical Store Depot, Madras, with effect from the 5th November 1923.

The services of Captain N. J. Bourke, I.M.S., are placed permanently at the disposal of the Government of Bihar and Orissa, with effect from the 15th September 1922. Home Department Notification No. F.242-22 (Jails) dated the 27th September 1922 is hereby cancelled.

LEAVE.

Lieut.-Colonel A. E. Walter, O.B.E., I.M.S., Superintendent, X-Ray Institute, Dehra Dun, is granted leave for 6 weeks with effect from the 5th December 1923, or the subsequent date on which he avails himself of it.

Major P. K. Gilroy, I.M.S., Resident Surgeon, St. George's Hospital, Bombay, has been granted furlough for 6 months with effect from the 6th January 1923.

Captain J. C. De, I.M.S., Civil Surgeon, Chittagong, is allowed combined leave for 12 months with effect from the 1st January 1924.

RETIREMENTS.

Colonel H. A. Smith, C.I.E., M.B., K.H.S., I.M.S. Dated 3rd November 1923.

Lieut.-Colonel P. St. C. More, O.B.E., M.B., I.M.S. Dated 1st November 1923.

Major J. Smalley, I.M.S. Dated 17th November 1923. The retirement of Major C. C. C. Shaw, I.M.S., is post-dated from 26th January 1923 (as notified in the *London Gazette*, dated 2nd March 1923) to 2nd September 1923.

RETENTION OF RANK.

THE undermentioned officers are permitted to retain the rank of Captain:—

Brajendra Nath Pal.
Bhasker Ramchandra Chandorker.
Kannauthodath Padmanabha Menon.
Prabhat Kumar Bardhan.

To be temporary Lieutenants.

James Patrick Arland. Dated 13th November 1923.
Mohindra Singh. Dated 19th November 1923.
Pudukotah Sreenivasachari Varadarajan. Dated 22nd November 1923.
Mohan Singh Segat. Dated 12th September 1923.
Rajindar Singh Sandhu. Dated 14th September 1923.

Achanvittil Krishna Menon. Dated 21st November 1923.

RESIGNATIONS

Captain Bhairon Dayal. Dated 10th August 1923.

RELINQUISHMENT OF RANK.

Lieut.-Colonel A. M. Fleming, I.M.S., relinquishes the acting rank of Colonel on ceasing to hold the appointment of Assistant Director of Medical Services, Bannu (Wazir Force). Dated 26th December 1921.

Major H. M. Inman, I.M.S., relinquished his acting rank of Lieut.-Colonel on ceasing to command No. 139, Indian Field Ambulance. Dated 21st February 1919.

MISCELLANEOUS.

Major A. H. Proctor, D.S.O., M.D., F.R.C.S.E., I.M.S., did general duty at the Medical College Hospitals, Calcutta, from the 18th to the 30th November 1923.

Major A. H. Proctor, D.S.O., M.D., F.R.C.S.E., I.M.S., acted as First Resident Surgeon, Presidency General Hospital, Calcutta, from the 9th to the 16th November 1923, *vice* Major E. W. O'G. Kirwan, I.M.S., granted leave.

On return from leave Major K. S. Thakur, I.M.S., did general duty at the Medical College Hospital, Calcutta, from the 11th to the 26th November 1923, both days inclusive.

The promotion to his present rank of Major M. J. Holgate, O.B.E., M.B., I.M.S., notified in Army Department Notification No. 1557, dated the 5th August 1921 is ante-dated from 31st July 1921 to 31st January 1921.

Captain B. F. Beatson, I.M.S., has been granted a permanent Commission as Flight Lieutenant in the R. A. Force with effect from the 7th November 1923.