

SUMMARY.

(1) Patients in Bombay appear to have acquired a certain amount of resistance to malaria infection, and hence cannot be infected by injections of blood from persons containing *P. vivax*.

(2) In our cases, injections of malarial parasites cultured *in vitro* produced no improvement of any kind.

(3) Malaria acquired in the natural way, while in the hospital, did not improve one patient's condition.

(4) In order to induce malaria and secure its therapeutic advantage, the patients had to be injected with fresh blood containing *P. falciparum*.

(5) Treatment by the usual anti-syphilitic measures did not result in any clinical improvement.

(6) Lange's colloidal gold reaction was not materially influenced either by the anti-syphilitic measures or other malaria therapy (*vide* graphs 1 and 2).

(7) Injections of hydrarg. perchloride lotion into the cisterna magna in one case did not improve the patient's vision or any other symptom.

(8) Effusion into the pleural cavity in case 3, developed suddenly without the patient showing any symptoms at all.

CONCLUSIONS.

Malaria therapy is beneficial in cases of tabes dorsalis, particularly the early ones. But in malaria-infected countries like India, where the patients have to be infected with *P. falciparum*, the problem becomes a difficult one. As some of these cases are likely to show severe signs of cerebral malaria, necessitating a constant and alert watch, and prompt treatment, the importance and responsibility of this line of treatment, can never be over-emphasized. As the malaria therapy does not influence the positive serological findings, it seems imperative that it should be supplemented by the usual anti-syphilitic measures.

We are very much obliged to Lieut.-Colonel S. S. Vazifdar, M.R.C.S., I.M.S., Superintendent and Senior Physician, Sir J. J. Hospital, for giving us facilities to carry out these observations.

THE INDICATIONS FOR SUPRAPUBIC CYSTOTOMY.

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SINCE the introduction of litholapaxy by Bigelow, and its modifications in India by Freyer, the suprapubic operation has fallen largely into disuse. Litholapaxy in hands accustomed to it is no doubt an excellent operation. But in *mofussil* towns of Bengal where one comes across stone cases only occasionally it is not always a safe and desirable operation even in expert hands. The instruments too are likely to deteriorate. I have seen a case of perforation of bladder in the hands of a very capable operator when he was operating with an old lithotrite. Of course

immediate suprapubic lithotomy was done and the patient made an uninterrupted recovery. On the other hand, suprapubic cystotomy is very easy to do, requires no special instruments, can be done in ordinary *mofussil* towns by surgeons of ordinary skill, complete removal of stone or any other foreign body is ensured, and the condition of the bladder wall can be definitely ascertained. Of course the convalescence is a little prolonged. The operation can also be undertaken with less danger in debilitated patients with cystitis, the type of cases we meet with in the *mofussil*.

The following case will illustrate this:—

Case 1.—A Hindu male, aged about 46, came to the outdoor department of the Comilla Hospital with the distinctive gait of pain in the lower abdomen. He was very emaciated, weak and anæmic. He gave a history of gonorrhœa. He said that about seven months before he had retention of urine for which a soft catheter was passed by a private medical practitioner, but as it was an old catheter a fragment of it was left behind. A few days after, he said, the broken fragment came out with the flow of urine. Burning during micturation and frequency of urination began shortly after that. On examination of the chest râles and ronchi were present on both sides of chest. The suspicion of stone was confirmed by the sound. But the patient was so very weak that it was not thought advisable to operate on him immediately. He was treated with urotropine, laxatives and a milk diet. But as there was no definite improvement of general health, it was decided to operate. As there was stricture of the urethra, the urethra was dilated by Lister's bougies. About 6 ounces of sterilized saline was then put in by means of a metal catheter. After the usual median incision the recti muscles were separated and the posterior layer of fascia was carefully incised. The subperitoneal fat was then pushed up, and with it the reflection of peritoneum; the bladder, recognized by its muscular fibres and bluish grey colour, was then fixed by two sutures high up, and was incised. Two horse-shoe shaped stones were removed by stone forceps and the bladder was drained by a siphon arrangement.

The patient was much relieved, but the bronchitis was definitely increased and he began to expectorate large quantities of purulent sputum. A mixture of oil of eucalyptus, tinct. benzoini co., tinct. belladonna and rum, and an inhalation of creosote and eucalyptus oil were then prescribed. In a week's time he was much better and there was no further trouble.

It will perhaps be not out of place to give a brief summary of two other cases in which suprapubic cystotomy was found to be of great service to me.

Case 2.—I was called in to see a respectable retired pleader of the local Bar, aged about 70 years, for retention of urine. I found the case to be one of enlarged prostate and relieved the bladder. A month later (13th August, 1928), I was again called in and was told that instruments had been passed before my arrival without any success. As there was much bleeding on the slightest attempt to pass a prostatic catheter I advised him to come into hospital for suprapubic cystotomy, which I carried out immediately. Drainage of the bladder was continued for about one month. As the abdominal wound was healing up he began to pass small quantities of urine through the natural passage and by the fourth week of September 1928, he had no difficulty in passing urine.

Case 3.—A Hindu, head constable, aged about 40 years, attended the Sadar Hospital with retention of urine on 17th March, 1928. He had been suffering from stricture of the urethra for about seven years. He gave a history of retention of urine on one occasion two years previously. On the present occasion instruments were tried by several private practitioners without any success. I found on examination that several false passages had

been made. I, therefore, thought it better to drain the bladder after suprapubic cystotomy in preference to the Wheelhouse operation. After two weeks the urethra was gradually dilated and the patient made an uneventful recovery.

I may here mention that I always drain the bladder after the suprapubic operation by stitching the walls of the bladder to the abdominal wall and in my opinion this procedure leads to better results than the so-called ideal operation of closing the bladder wall.

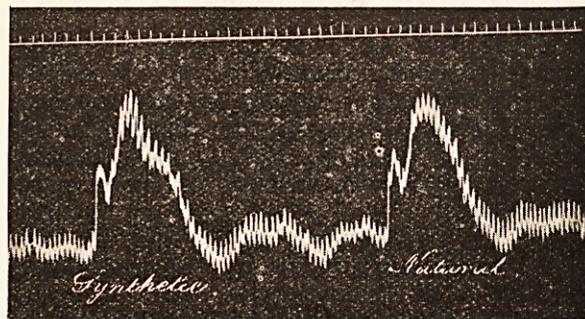
A NOTE ON THE ACTION OF SYNTHETIC ADRENALINE.

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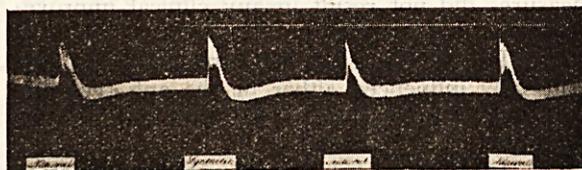
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ADRENALINE was the first of the "hormones" to be separated in a state of purity and it is the only one included in the current edition of the British Pharmacopœia. It was first isolated from the suprarenal gland by Abel and Crawford (1897) and Takamine first obtained it in a crystalline form. Adrenaline was also the first of the hormones to be synthesised; the synthesis has been attempted in many ways but the method of Scholtz patented by the Farbwerke vorm. Meister, Lucius and Bruning (1904) gives the best results (Linnel, 1928). The synthesis of the racemic compound was first accomplished, but now the same firm has put on the market the synthetic L-rotatory adrenaline under the name of "Suprarenin Synth." along with their natural "Suprarenin."

Recently there was a complaint in our hospital about the efficiency of certain brands or samples of adrenaline in use and so all of them, "good" and "bad," were sent to this department to be tested. The ordinary method biological standardization was used, but, instead of a standard, fresh samples of adrenaline of certain reputed manufacturers were obtained from the local agents and used for the comparison. The method is based on the fact that if in an animal the same quantity of adrenaline is injected several times in succession the rise in blood pressure caused by each injection is about the same (Storm van Leeuwen, 1923). Burn (1928) recommends the cat as a suitable animal, but Pittenger (1928) prefers dogs; the latter were used here being the most easily available animals. Several tracings were taken, after the injection (into the femoral vein) or each sample in every animal, and compared. Since the "Suprarenin Synth." was one of the samples referred to us from the hospital, it was also tested along with others and found to be equal to the best samples of natural adrenaline of the same and other manufacturers. A few of the carotid blood pressure tracings are given below:—



No. 1.—Dog's carotid blood pressure after intravenous injection of equal doses of synthetic and natural adrenaline or "suprarenin." (Time marking: 10 secs.)



No. 2.—Comparative effects after intravenous injection of equal doses of different brands of adrenaline on carotid blood pressure of dog. (Time marking: 10 secs.)

The original synthetic (racemic) D-L-isomer was found to be nearly half as strongly vaso-constrictor as the natural by Cushny (1926). Hence, certain statements like the following:—"Natural adrenaline is L-rotatory, synthetic adrenaline is optically inactive and has only about half the toxicity of the natural variety because it is a mixture of stereo-isomers" (Dixon, 125), have created the impression among the students and practitioners that a L-rotatory adrenaline, identical with the natural base, has not yet been synthetically prepared, or, at least, is not on the market, and they hesitate to use it, if such a preparation is offered to them. The results of the tests at this laboratory have therefore been published. They show only the hæmodynamic action due to its action on blood vessels after intravenous injection, but there are reports of its efficiency as a vaso-constrictor when applied to mucous membranes (Kraupa, 1928) and used with anaesthetics (Fuler).

It is claimed that the synthetic L-adrenaline possesses certain advantages over its natural isomer. It is said to be more uniform and free from impurities, therefore it can keep longer. All this is obvious from its method of preparation and source; and it is hoped that the next edition of the B. P. will include also the synthetic product (Bennet, 1928).

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