NOTE ON THE MORPHINE-HYOSCINE METHOD
OF PAINLESS CHILDBIRTH.

BY

A. F. MARTIN, M.D. VICT.,

TEMPORARY LIEUTENANT R.A.M.C.; MEDICAL OFFICER TO G.H.Q.,
SALONICA ARMY.

THE importance of the article in the BRITISH MEDICAL JOURNAL for October 14th last by Drs. Haultain and Swift on this subject cannot be overestimated. I have thought that a few further observations from my own experience in fifteen cases, all primiparae, would perhaps be of help. These results were embodied in a paper read before the Bradford Medico-Chirurgical Society in March, 1916.

To acquire the technique of Kronig's method was not easy. The first difficulty was to know when to give the first dose. I fancy I have met cases in which the os was the size of a crown, but where, notwithstanding this, the uterine pains were inhibited by the hyoscine, which paralyses the nerve endings in the uterine muscle.

The rule laid down by Drs. Haultain and Swift will be of great help; but my experience leads me to say that the first dose should not be given until the pains have reached that point when the uterine reflex will not be denied. The early, ineffective, "niggling" pains should have given place to longer pains to which the woman is beginning to bear down, and which result in a tense bag of membranes for more than a few seconds, and some stretching of the cervix.

Earlier than this the woman can be relieved by inserting a tampon soaked in a freshly prepared solution of 2 per cent. cocaine through a narrow Ferguson's speculum, as recommended some time ago in the columns of the BRITISH MEDICAL JOURNAL.

One disadvantage of the method is that in the hands of a beginner the drugs certainly make the pains less frequent and weaker, so that labour is longer, and I think forceps more often used when the head is on the perineum—a minor consideration with reasonable care.

My impression is that the dose I used (morphine gr. $\frac{1}{10}$, hyoscine gr. $\frac{1}{100}$) was a little too large in some susceptible women, where the uterine reflex was weak or not fully established. The known reaction of the patient to drugs should be considered, and each case thought out as a separate entity. Hyoscine gr. $\frac{1}{100}$ is more to be recommended, and I have tried morphine gr. $\frac{1}{10}$ in some of my best cases. Pituitrin 1 c.cm. is of no use to reinforce weak pains. I have tried it repeatedly.

Drs. Haultain and Swift favour an early second dose. In my last case I obtained amnesia with morphine gr. $\frac{1}{10}$, hyoscine gr. $\frac{1}{100}$, the hyoscine being repeated in two and a quarter hours in a dose of gr. $\frac{3}{100}$, which has been my usual dose for repetition. I thought this case was going to prove a failure, for the degree of mental dissociation was slighter than I had usually obtained, the patient talking quite aptly during the pains. On questioning her afterwards, she remembered nothing after the first injection had been given ten minutes.

In my experience, it is safer to decide when to give a reinforcing dose by the patient's condition rather than by the clock. I could not find much satisfaction in the memory test. It perhaps was made too obvious. I shall try it again by using something less dramatic than a pair of scissors and assuming an offhand manner. I endorse Drs. Haultain and Swift's opinion that the amnesic state can be efficiently estimated on general observation of the patient.

Another disadvantage of too deep anaesthesia is that sometimes the patient cannot concentrate sufficiently to bear down and help the pains by her own efforts as well as normally. This is present in any case in some susceptible women, a reinforcing dose being only given every two or three hours.

The state to be aimed at is one in which the patient does what she is told promptly and effectively during the pain, of which she complains bitterly at the time. After the pain is over she talks irrelevantly for a few seconds, and then settles down to a light noiseless sleep. Stertorous breathing soon after a reinforcing dose is to me a sign that it has been given too soon or has been too large. It is especially to be avoided at the beginning and end of the treatment.

The method is suitable for general practice provided the practitioner can give the case undivided attention from the beginning to the end, and has a nurse who knows when to call him, and can give one of the early reinforcing doses herself. Nurses usually send too late. This happened in my only case which failed. When I first saw the patient dilatation was complete. The pains were slowed down by a full dose, and what had promised to be a fairly quick labour developed into a very tedious one, and the second dose did not produce amnesia.

The accoucheur need have no dread of chloroform in these cases; less than usual is required for a forceps operation; it is taken well, and has not been followed by increasing haemorrhage or lack of vitality in the child.

No babies have been lost in my fifteen cases, but one needed a lot of stimulation to induce breathing, although the heart was quite sound and slow all the time. In this case the last part of labour was quicker than expected, and I had given hyoscine gr. $\frac{3}{100}$, the fourth dose, only half an hour before the baby was born. A dose should never be given within two hours of the birth of the child, estimated on probabilities.

Kronig makes a point of using a fresh solution of hyoscine, but I have found the tablets of Messrs. Parke, Davis, and Burroughs and Wellcome very satisfactory.

I usually give a little chloroform when the head is being born.

What danger there is lies in overdosage of morphine and hyoscine. The advantages, to my mind, very much outweigh the disadvantages. Nothing has given me more pleasure than to be able to relieve some of the worst pain in one's experience.

PRELIMINARY NOTE ON A MONOMORPHIC
TRYPANOSOME FOUND IN THE BLOOD
OF A NATIVE OF THE GOLD COAST.

BY

J. W. S. MACFIE, D.Sc.,

PATHOLOGIST, GOLD COAST.

HITHERTO all the trypanosomes described as occurring naturally in the human blood have been polymorphic. Lanfranchi, it is true, had the misfortune to infect himself with a trypanosome that appears to have been either *T. brucei* (Zululand) or *T. evansi*, but as this accident occurred in his laboratory the infection was not a natural one. Recently I have been privileged to examine two blood slides from a native of the Gold Coast suffering from trypanosomiasis, and as the parasite found was of a monomorphic type the infection is of considerable interest.

The patient was a native man, a member of the Gold Coast Constabulary, who was examined by Dr. E. W. Graham at Tamale and found to be suffering from trypanosomiasis. The history of the case suggested that the infection might have taken place about three weeks previously, but apart from slight fever, which Dr. Graham thinks may not have been due to the trypanosomes, the patient had no symptoms of illness. After the first injection of atoxyl the trypanosomes vanished from the blood, and up to the time of writing they have not reappeared. I am indebted to Dr. E. W. Graham not only for sending me the blood films but also for taking a great deal of trouble to trace the patient, who had left Tamale, and for trying to obtain for me the strain in animals, and I take this opportunity of expressing my sincere thanks to him.

Dr. Graham, in the first instance, sent me last September a single blood film, but, in reply to my telegram asking him if he could procure further materials, sent me a second film which he had taken before the parasites disappeared from the blood. In both films a moderately heavy infection with trypanosomes was found, and even at first glance it was evident that the morphology of the parasite was unusual.

The trypanosomes resembled very closely *T. vivax*, a parasite of which Bruce says, "This species of pathogenic trypanosome can at once be recognized among all the others by its shape alone." They were monomorphic—that is, they were all of the same form and nearly of the same size. The body showed the characteristic abrupt

narrowing immediately anterior to the nucleus. The cytoplasm was relatively clear, and showed an alveolar structure. The posterior end was usually blunt, and the large rounded blepharoplast was terminal or nearly so. The undulating membrane was poorly developed, so that the flagellum ran usually along the body in a more or less straight line, and there was always a long free portion to the flagellum. The nucleus was long, oval, and often divided into several pieces.

A hundred trypanosomes taken as they came from each of the films were drawn with the aid of a camera lucida and measured (see Table I). Of these 200 parasites the longest measured 24μ , the shortest 18μ , and the average worked out at 20.7μ . The numbers of trypanosomes of each length were almost exactly the same in

the two films. These measurements indicate clearly the monomorphic character of the parasite.

In order to emphasize the profound difference between this trypanosome and the organism usually found in

human trypanosomiasis (*T. gambiense*), I have plotted as curves the measurements of length by percentages in Chart I, and have added as contrast those for *T. gambiense*, as given by Stephens and Fantham.

The morphology of this trypanosome very closely resembles that of *T. vivax*. The small number of measurements that have been made so far suggest, however, that it is a little smaller, the crest of the curve occurring at 21μ instead of at 23μ . The trypanosome appears, indeed, to be intermediate between

T. uniforme and *T. vivax* as regards its morphology, but further examinations will have to be made before any definite conclusion can be arrived at.

T. vivax is an exceedingly common parasite of domestic animals in West Africa, and was found in no less than 76 per cent. of the hump-backed cattle examined by me at Accra. It would therefore be a serious matter if this species were proved to be pathogenic to man. Further investigations are in progress, and it is still possible that the strain may be obtained for laboratory experiments, although as the patient has been apparently free from parasites for a long time the chances are not very great. Meanwhile, as I expect to be leaving the Gold Coast almost immediately, this preliminary note is published in order to draw attention to the fact that there is in West Africa a species of monomorphic trypanosome capable of infecting man.

CHART I.—The distribution according to length of *T. gambiense* (continuous line), and the monomorphic trypanosome (broken line) found in the blood of a native of the Gold Coast.

TABLE I.—Measurements of Length of the Monomorphic Trypanosome found in the Blood of a Native of the Gold Coast.

Materials.	Number Measured.	Lengths in Microns.							Average Length in Microns.
		18	19	20	21	22	23	24	
First specimen ...	100	3	14	25	37	17	3	1	20.6
Second specimen ...	100	1	13	23	39	16	5	3	20.8
Totals ...	200	4	27	48	76	33	8	4	
Percentages ...		2.0	13.5	24.0	38.0	16.5	4.0	2.0	20.7

THE SIGNIFICANCE OF THE LYMPHATIC GLANDS SITUATED ON THE ANTERIOR SURFACE OF THE ATLAS.

By A. ERNEST MAYLARD, B.S.LOND.,
SURGEON TO THE VICTORIA INFIRMARY, GLASGOW.

ONE, perhaps, of the commonest places for tuberculous lymphatic glands is just below the angle of the jaw—that is to say, at the upper part of the anterior triangle. The reason for this is probably to be found in the greater readiness with which they are infected by lymphatics passing from the mouth, and more particularly from decayed molar teeth. But the tonsils and upper parts of the pharynx may also be regions from which septic matter may be conveyed. From whatever source, however, derived it is certain that the infection very frequently extends not only to the more superficially situated glands but to those lying deep in the cervical region, as deep as the transverse process of the atlas.

The clinical significance of this implication of the deeper glands lies in the fact that treatment applied solely to the superficial ones will leave the deeper still untouched and a probable source of future trouble. It is a very common experience to be asked to deal with a "sore" in the upper part of the neck that will not permanently heal. The story usually obtained is that a glandular abscess has been opened, and possibly its walls scraped; that the wound healed but then broke down, and a small discharge ensued for a time, followed again by healing. This ding-dong condition of matters goes on for months, until the case at last comes into the hands of the operating surgeon for radical treatment. What is then found is that a circuitous sinus conducts down to a caseating and suppurating gland lying on the transverse process of the atlas. After this has been removed permanent healing takes place.

It is often solely for desired cosmetic effects that the practitioner is tempted to make a small incision into the superficial, enlarged, suppurating glands; and possibly he puts in a small drainage tube or lightly stuffs the cavity. His chief object is to produce as small a scar as possible. But, considering the protracted course which the condition is only too likely to take, there can be but little doubt that the best cosmetic results are obtained by the radical treatment—that is to say, by a free incision and a complete extirpation of the deep-lying glands. The dissection is often by no means easy, and, although quite free from danger in experienced hands, it should not be lightly undertaken. Both the jugular vein and the spinal accessory nerve are liable to be implicated; and when there is much in the way of periglandular inflammation and adhesions, one or the other, without due care, may be injured.

DEATH AFTER SALVARSAN.

BY

MANECK D. WADIA, M.R.C.S., L.R.C.P.,

CAPTAIN I.M.S.,

MEDICAL OFFICER, PRISONERS OF WAR CAMP, SUMERPUR,
RAJPUTANA.

I AM much obliged to the Director Medical Services in India for permission to publish the following case, and to Captain P. Hayes, R.A.M.C., for comments:

A sepoy, K—, aged 23 years, was admitted into hospital on May 22nd, 1916. He had a chancre on the penis about six weeks before, which healed under treatment. There was nothing important in his past history. He was thin and somewhat anaemic, and presented a typical secondary rash on the body, with mucous patches in mouth and general adenitis. Nothing abnormal was detected in the chest and abdomen and the urine was normal. A dose of castor oil was given and he was kept on milk diet. Salvarsan 0.5 gram was given intravenously at 10 a.m. on May 23rd. He had a good deal of vomiting and