

the cocaine was stopped for a day, but the eye became much congested, and the patient complained very bitterly of discomfort, so the cocaine drops were again resorted to and continued for twenty-eight days, when the eye had resumed a perfectly normal appearance, and when I extracted the lens: an experience similar to the preceding was again gone through. She can now with glasses read 0.5 Snellen, but keeps the cocaine drops by her, as her eyes frequently become red and congested and the drops give prompt relief.

G. H.—, aged sixty-five, was also a female suffering from acute glaucoma (right eye) with intense congestion. She had been having for ten days liq. atropiæ (B P) applied. This case was first seen by me on Nov. 23rd, 1893. Not knowing the nature of the case I was going to see, I had no instruments with me. On seeing the patient there was barely perception of light. I ordered a few drops to be instilled frequently of thirty minims of liq. eseriniæ two grains of cocaine, in two drachms of a saturated boracic acid solution. On the following day the patient could count my fingers. The eye was much less inflamed, and the tension was greatly diminished. She declined operation "for the present," as she could "see now," whereas the previous night she was blind, &c., and, moreover, she was now nearly free from pain. In vain did I point out the dangers of her position. However, on Nov. 29th I saw her again, and she was then satisfied that the little sight she had in this eye was going, so she submitted to an iridectomy. After the iridectomy a one grain to one drachm solution of cocaine was used for some days, and when I saw her the sight was improving considerably and her eye quiet.

J. K.—, a woman aged thirty-five, had, when she saw me on Dec. 23rd, 1893, a large blister on the right conjunctiva, extending from the outer canthus to the margin of the cornea. The conjunctival vessels were enlarged in the blister. A pink and congested patch of sclerotic lay beneath it. Cocaine and boric acid solution was applied twice within ten minutes, during which time the enlarged vessels in the conjunctiva were observed to shrivel up, and the episcleral patch became white and ivory-like. There was no return of blister. This patient consulted me again in January this year, when the same sequence of events occurred.

I could give other examples, but hope that these will suffice for my purpose. The fact I wish to bring out is that cocaine has a direct antiphlogistic as well as an anæsthetic influence upon the parts to which it is applied. During the past year I have used it as after-treatment to the painful and inflamed cavity from whence I had excised an eye; to numerous iridectomies necessitated by injuries to the cornea with prolapsed iris; to painful eyes after operations for strabismus; and to the numerous class of cases included under those I have related, and up to the present time have never seen anything but permanent good result from its employment. I have also used cocaine in many cases where I have been working out refraction by retinoscopy and in protracted ophthalmoscopic examinations, and as a routine practice, if my patients complain of aching from the light from the mirror, I give a five minutes' rest and apply a drop of cocaine solution to my patients' eyes with the immediate result of relieving the tired, aching feeling.

In conclusion, I should like to draw attention to one point. Episcleritis or scleritis is generally, I believe, regarded as a rather rare disease. In a district like this, situated largely on the clay, rheumatic affections of muscles and joints are amongst the commonest diseases of everyday life, and I do not think I should be exaggerating if I said the most common cases one sees are of a more or less acute or chronic rheumatic character. Rheumatism is credited with having a special tendency to attack fibrous structures, and I therefore think it is not improbable that a larger number than we anticipate of inflamed and painful eyes with which we have to deal are of a rheumatic character. Speaking generally, I do not think these cases are much relieved by atropin—in fact, they are aggravated by it; but I do believe that in these cases infinite good may be done by the judicious use of cocaine. One word of caution is necessary. If a weak solution of cocaine (one grain or two grains to the drachm) be used, little or no fear of causing any symptoms of poisoning exists, and no danger need be anticipated of damaging the corneal epithelium. I cannot, however, help feeling that a strong solution—say 10 per cent.—is fraught with a double danger and if used frequently may produce toxic symptoms and serious damage to the corneal tissue.

Batley, Yorks.

A SERIOUS CASE OF COMPLICATED GALL-BLADDER DERANGEMENT ILLUSTRATING THE BENEFITS OF OPERATIVE INTERFERENCE.

BY SAMUEL KNAGGS, M R C.S. ENG.,
SENIOR SURGEON TO THE HUDDERSFIELD INFIRMARY.

A MAN fifty-seven years of age, of anæmic and semi-jaundiced appearance, had suffered from recurrent pains in the hepatic region of a severe and agonising character for over twelve years. These pains were sometimes, but not usually, attended by vomiting, and were followed or ushered in by clay-coloured fæces, bilious urine, and general jaundice. They have been quickly relieved by the subcutaneous injection of morphia, and in their earlier history the relief was followed by rapid convalescence. Of late the attacks have shown a greater tendency to inflammatory complications, and convalescence has been greatly retarded; when, however, it has been established the patient has seemed to be strong and vigorous. But his later attacks have been very serious, more quickly recurring, and have more than once endangered his life. After seeing him in two of these dangerous seizures, which were evidently associated with a localised peritonitis, and deeming that the symptoms all pointed in origin to an impacted gall-stone, I advised him to submit to an operation for its removal. For this purpose, as soon as he was able to be removed, he was admitted into the Huddersfield Infirmary on July 22nd, 1893, and ordered to be kept in bed; nitro-muriatic acid lotion was to be kept constantly over the hepatic region. As a medicine the following mixture was ordered three times a day: tincture of digitalis, seven minims; tincture of nux vomica, ten minims; iron mixture to one ounce. The diet consisted of skimmed milk and beef-tea, lean meat, and dry bread. These were the chief measures employed in preparation for the operation.

He was very anæmic when he came into hospital, and the temperature for the most part was subnormal, but with rest in bed and under this régime he improved greatly, and on August 23rd the operation was performed. An incision of about four inches to the right of the rectus muscle exposed a matted state of the intestines in the region below the liver, and the notch, though readily felt, gave no indication either of stone or distended gall-bladder. The surface of the liver exposed seemed quite healthy and free from deposit. On slowly and very carefully detaching the adhesions as closely as possible to the liver, so as to get down to the gall-bladder, a considerable surface was detached and freely separated; and at last a firm pipe-like structure was exposed, which, being opened at its uppermost part, proved to be the remains of the contracted gall-bladder. The tube was empty, and on attempting to pass a probe it went in for a short distance, and then its advance appeared to be obstructed. However, it gradually yielded to gentle pressure and was in this way slowly passed outwards between two and three inches, when its further progress was blocked by a hard swelling, in the centre of which the probe could be fixed. From the sensation communicated through the probe it was evident that the swelling was of a cicatricial character and not an impacted stone. The parts on the under surface of the liver and the sites of the ducts passing into the duodenum were very carefully explored, but gave no indication of the presence of any gall-stone. No appearance of bile followed the removal of the probe, and though the liberation of the adhesions was very free there was no hæmorrhage. To prevent, if it were possible, any soiling of the general peritoneal cavity with gall-bladder secretions, it was suggested by Mr. Lawford Knaggs, who was present at the operation, that antiseptic gauze well sprinkled with iodoform should be packed all round about the gall-bladder, and the ends brought out at the wound. This was done, and it was hoped that any discharge would be soaked up by the gauze, and that the general peritoneal cavity would be shut off by the adhesions which would form between the parts lying in contact with the gauze. The wound was then united by silkworm gut, excepting at the lower part, where the opening was left for the ends of the gauze, and covered with the ordinary antiseptic dressings. The gauze was daily removed and fresh gauze reintroduced for about a week, at each dressing being well packed down to the bottom. During the whole of this time

the temperature kept perfectly normal. The packing was then discontinued and the wound allowed to heal. General improvement set in afterwards, and he left the infirmary well on Sept. 25th.

I saw the patient again on March 3rd, 1894, and he told me that he had had no return of his attacks since he left the infirmary. He went back to his work soon after leaving. He looked very well and said that he had not had such freedom from pain for many years. His weight was then (March 3rd) 11 st. 6 lb.; when he went into the infirmary it was 9 st. 12 lb., and he had then lost about 2 st. in the last twelve months.

The originating cause of the constricted gall-bladder and strictured bile-ducts could not be demonstrated with certainty, but can be inferred with a strong probability. It is to be noted that the stricture was in the cystic duct, and prevented the accumulation of bile in the gall-bladder, which accounts for the contraction of the gall-bladder and the absence of bile therein. The cause of the stricture was in all probability due to a stone, which must have passed through the bile-duct into the duodenum, leaving at the site of its resting-place an ulcerated condition, which in the end resulted in permanent and impermeable stricture. The adhesions were probably formed during the ulcerative stage and prior to the formation of the stricture. The recent attacks of jaundice must be explained by some obstruction to the flow of bile in the common duct; and as no bile was found in the gall-bladder, or stone traced, one cannot suppose that this obstruction was produced by stone. The attacks were sudden, frequent, and varying greatly in severity; it is evident that some condition capable of producing them was very easily brought about. Would not a kinking of the common duct sufficiently explain the phenomena? The adhesions between the structures in the vicinity of the common duct might easily lead to the production of such a condition by the varying and irregular distension of the fixed intestinal coils. If the kinking of the common duct be the correct interpretation of the phenomena observed in this case, it is easy to understand how the separation and keeping apart of the adhesions might have relieved a condition which was often on the borderland of trouble. The prevention of the kinking, the non-recurrence of obstructive jaundice, and his improved digestion and appetite would all explain his general and remarkable improvement. The importance of the bearing of adhesions upon diseased conditions of various kinds has in late years been brought so prominently forward that perhaps there may be some interest in the record of this case. Huddersfield.

THE "SLEEPING SICKNESS OF WEST AFRICA."

BY C. FORBES, M.D., C.M., D.P.H. CANTAB.

Symptoms.—The victim of "the sleeping sickness of West Africa" (old or young, for this curious and deadly complaint may make its appearance at any epoch of life, though it is more commonly found between the ages of twelve and twenty years, and is more often seen in men than women) gradually gives way to somnolence, which becomes at last a profound and lethargic sleep, the first noticeable signs of which are a visible and persistent drooping of the eyelids of man, woman, or child in the daytime while at work, enlargement of the glandulæ concatenatæ and other cervical glands at the onset. The general health of the negro at first seems to be fair, though he gradually appears to give way to sleep at unusual hours. This tendency to drowsiness and torpor can be combated to a certain extent at the outset by stimulation and purgation; but the patient thus aroused from this lethal slumber, which truly recalls the words of Homer, ὕπνος καὶ θάνατος τῷ διδύμῳ ἀδελφῷ, nevertheless relapses almost infallibly again and again into this somnolent condition, the periods of sleep increase in number and the intervals between them lessen, their extent proportionally lengthening. This state of things continues while the malady steadily gains ground; soon the negro appears to be always asleep, bearing semblance in his life—I should, perhaps, say existence—to insensitive and fungus-like development only. This condition goes on for a varying period, weeks or months, and he little by little refuses all food, spending his time in slumber. When increasing atrophy sets in, with emaciation, after a short space death from exhaustion and starvation

almost invariably occurs at the end of three, six, or twelve months. Here it may be stated that just when moribund the tendency or disposition to lethargy is sometimes in abeyance, and the mental faculties become clear at last previous to their total extinction.

Endemiology.—Its endemic area is West and West Central Africa, from Senegal to the Congo, in the Sierra Leone district, and the *Hinterland*, but cases are more frequently met with and more virulent in their nature in the valley of the Congo. They are also more numerous inland than on the coast line. It has never been known to affect any but the negro race, but has been seen in the West Indies &c. among those who have been brought thither as slaves from the Congo or Sierra Leone districts.

Prognosis.—The prognosis is bad, as the disease once established progresses actively, almost in spite of treatment, to a fatal issue. Guérin reports 148 cases, the result was death in each. Gore's statistics drawn from Sierra Leone &c. say that there were 80 per cent. of fatal cases, rather underestimating the rate of mortality, I fancy. Personally, my experience extends to only thirteen cases, two of which lived for some time; whether they afterwards succumbed to renewed attacks I know not, but I do know that eleven died.

Pathology.—The results of various post mortem examinations may be briefly noticed as follows, they include morbid appearances visible to the naked eye—viz., hyperæmia of the arachnoid, and slight signs of chronic inflammatory processes going on in the meninges (*dura mater* and *pia mater*). Notwithstanding this we find no great accumulation of fluid in the ventricular cavities of the brain or external to it in the sub-arachnoid space, &c. It is worthy of remark that the cerebral substance itself is paler than it should be, pointing to anæmia of the cortical centres. The spleen was enlarged in one of my cases, but this was probably due to malarial taint. There was also definite enlargement in the cervical lymphatic glands with arrest of development of active glandular elements evidently giving rise to, or caused by, some perversion of the quality of the circulating blood. In two cases, examining the blood with the microscope, I found *filaria sanguinis hominis*; but the appearance of this parasite might be deemed adventitious or only a coincidence, as similar filarians are found in other countries and diseases. Dr. S. Mackenzie,¹ however, ably describes his discovery of this parasite, and Dr. Manson² still later in "Davidson's Diseases of Warm Climates," 1893. Cases of patients with organic lesions of the brain tissue have seemed to acquire the peculiar characteristics of this "Congo sleeping sickness," which is a misnomer.

Etiology.—The causation of this curious disease may be said to be wrapped in the deepest obscurity. Many attempts have been made to elucidate it. One suggestion put forth was that it arose from a form of blood poisoning arising from ingestion of a fungus growing on certain grains used by the natives as food, but no absolute proof of this assumption is forthcoming. Nor has change of diet and residence, according to my experience and that of others, had any effect on the steady progress of the symptoms. The complaint is, indeed, involved in mystery, and its problem of causation remains unsolved. The three most acceptable theories are: (1) That it may be due to a septic condition of the blood, borne out by swelling of glands, &c.; (2) is it due, as Dr. Manson was the first to point out, to the presence of *filaria* in the blood? (3) or it may be (though this is an assumption on my part) a neurosis, eventually affecting the neurotrophic system and causing ultimate emaciation and death: this is somewhat substantiated by appearances and lesions sometimes found post mortem in the brain and its membranes.

Treatment.—This can, of course, be but tentative in the present state of our knowledge of the true cause. I will, therefore, run briefly over remedies which, from personal use, I consider most applicable, taking, as perforce I must, a somewhat empirical view of the subject. At the onset I administer by the mouth compound cathartic tabloids, two at night time; and as stimulant tonics I gave the patients at least twice a day tabloids (hypodermic) of strychnine sulphate ($\frac{1}{10}$ gr.): these I gave subcutaneously when the patient was asleep, varying this with digitalin ($\frac{1}{100}$ gr.) put up in the same form, which is reliable and convenient in tropical practice. These small discs may also be placed beneath the tongue, where they become dissolved quickly, and are almost as rapidly absorbed as when injected subcutaneously. Even when at the last gasp injections of ether over the cardiac area will appear to sometimes rouse our patient.

¹ THE LANCET, Nov. 22nd, 1890.

² THE LANCET, Oct. 1st, 1892.