Chart of the pulse (dotted curve) and temperature (continuous curve) in the case of snake bite in an Egyptian girl. The rise of temperature and pulse during the afternoon of the fourth day (October 7th) was the beginning of the pyrexial period associated apparently with the suppuration at the site of the wound.

ture was going up, and as there appeared to be some tension. The wound was stuffed with dermatol gauze.

After this she made a continuous recovery, and was discharged cured on October 28th, 1896.

REMARKS.

As the snake was not killed it is not possible to say exactly what it was. Our friend Dr. Innes, curator of the Zoological Museum, and who has for a long time collected the snakes of Egypt, thinks that, judging from the child's description and the locality where she was bitten, the snake was probably the Egyptian cobra. That the snake was a highly venomous one cannot be doubted, considering the child's precarious condition when admitted. It was impossible to find out exactly at what time of the afternoon the child was bitten, but from inquiries it would appear that it was three to four hours before admission. With regard to the action of the serum, it would be rash indeed to draw any conclusions from this one case. All we can say is that the improvement following its administration was very marked, and that it produced no evil effects whatever. Neither rash nor joint-pains were noticed afterwards. The serum was made by Dr. Calmette, of Lille, and we have to thank the Société Chirurgique des Usines du Rhône, Lyon, who, as good luck would have it, had very liberally a few days beforehand sent us a supply of this serum. The abscess which formed in the arm, and which retarded convalescence, may possibly have been caused by the snake poison, but was most probably produced by the secondary infection from the Nile mud, with which the village barber had plentifully dressed the wounds in the first instance.

INTRACRANIAL ANEURYSM TREATED BY LIGATURE OF THE COMMON CAROTID.¹

By RODERICK MACLAREN, M.D.,
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THERE are few lesions which are so little capable of diagnosis as intracranial aneurysm. The miliary aneurysms which are the invariable cause of non-traumatic cerebral hæmorrhage give rise to no symptoms or signs till their rupture produces apoplexy and paralysis. And when these conditions are present it is often a matter of extreme difficulty to ascertain during life whether they are due to hæmorrhage or to some other cerebral lesion. With the large intracranial aneurysms situated on some one or other of the principal arteries, it is a rare thing to be able to get evidence of their existence during life. They either produce symptoms of a very equivocal kind, or, still more frequently, none that attract attention. Their existence is, generally speaking, first determined by *post-mortem* examination. I think, therefore, that the story of a case, in which the diagnosis was clear and the indications for treatment distinct, worthy of record. There are some other questions, also, both medical and surgical, on which this case throws a side light.

The patient, a domestic servant, aged 40, was sent to me on April 29th, 1896, by my friend Dr. Knight, of Keswick. Her story was that seven weeks before she was suddenly seized with pain on the left side of the head and in the left eye. At the same time she became aware of a rushing noise on the left side of the head. Very soon afterwards the left eye felt weak and watery, and the eyelids swelled.

On examination the following condition was ascertained: The left eyeball was pushed forwards, both upper and lower eyelids on the left side were swollen and œdematous. There was congestion of the conjunctival vessels. There was almost complete paralysis of the external rectus of the left eye. The pupil was active; vision normal. The other movements of the eye were right. The fundus was healthy and the disc normal. On auscultating the cranium a loud systolic musical *bruit* was heard. It was audible all over the head and a short distance down the back of the neck. It was loudest over the left orbit and temple. When the left common carotid was compressed the murmur entirely dis-

¹ Read before the Border Counties Branch of the British Medical Association.

appeared; it was not influenced by pressure on the right common carotid. Her arteries everywhere were extremely atheromatous. The heart was large and the apex beat two inches to the left of the middle line. There was a marked amount of albumen in the urine. The inference from this combination of symptoms was that she had an aneurysm of the internal carotid, pressing on the cavernous sinus, the sixth nerve, and the auditory nerve. She agreed to go to the Cumberland Infirmary, and was admitted on the same day. She was kept under observation in bed for a few days, and became notably worse; her eyelids gradually swelled more and more, and the conjunctiva was chemosed and half covered the cornea.

On May 8th I tied the common carotid. Improvement began at once; by night the eyelids were less swollen; the *bruit*, of course, disappeared immediately. On the following day it was noted that the eye was less prominent, and the hearing greatly improved. Two days after the operation the proptosis had disappeared; the oedema and deafness were gone, and there was improvement in power of the external rectus. She continued to do well. The wound healed at once. In three weeks the external rectus had regained most of its power. She was discharged from hospital seven weeks after the operation. The movements of the eye were then perfect; her vessels were decidedly softer. The apex beat was in its normal position, and there was no albumen in the urine. She had been kept on farinaceous diet throughout, and after the operation had iodide of potassium in 10-grain doses three times a day. Dr. Knight writes me (October 19th) that she is very well.

The first point to which I wish to call attention is the material used and the method of tying the common carotid. Her vessels were so atheromatous that I was desirous of ligaturing with as little injury to the vessel as possible, so I used kangaroo tendon, which makes a somewhat flat string. I did not tighten the first hitch of the knot very much, to avoid cutting the middle coat of the vessel, merely using sufficient pressure to close the lumen of the artery. In tightening the second hitch, however, I pulled rather too hard, and broke the ligature. This necessitated a second application of a ligature which was tied in a similar fashion, but without pulling quite so hard. The substance and method were entirely satisfactory; the vessel has remained closed and the wound healed absolutely by first intention. When the neck was examined about a week after operation the ligature could not be felt.

Another matter to which I would strongly direct attention is the very great improvement in the patient's general state, which followed treatment. This consisted of three things—milk and farinaceous diet, iodide of potassium, and rest in bed. I cannot pretend to tell which was the most prominent factor in her cure, but the result was thoroughly satisfactory. There was no history of syphilis, and nothing was elicited which was suggestive of its existence. It is alleged that this is by far the most common cause of intracranial aneurysm, and that atheroma has a second or even a doubtful place; but in this case there was no evidence to support this view.

A CASE OF ACUTE SEPTIC GENERAL PERITONITIS WITH SEPTIC METRITIS TREATED BY ANTISTREPTOCOCCIC SERUM; RECOVERY.

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ON AUGUST 26th I was called to attend a young lady who had been married only three weeks previously, up to which occasion her health had been perfect, menstruation being quite regular and free from pain.

On August 17th a period which was then due had commenced, and the loss of blood continued up to the date of my first visit. From August 17th she experienced pain and tenderness in the lower part of the abdomen; there had also been slight diarrhoea. The abdomen moved well on respiration, but on palpation I discovered rigidity and tenderness

over the lower half of the abdomen, especially over the region of the left ovary and the fundus uteri. No distinct mass could be detected, and the abdomen was resonant all over. By the vagina the uterus was felt to be in good position, but the cervix and body were slightly enlarged and tender to the touch. The pulse was slightly quickened and the temperature was 100° .

There was a history of exposure to cold and fatigue at the onset of the period. I therefore diagnosed pelvic peritonitis, and ordered complete rest, milk diet, and hot fomentations to the abdomen, with small doses of opium internally. From August 26th to August 29th the condition of the abdomen improved; the pulse and temperature became normal, and the flow of blood ceased.

On August 30th, at my visit in the morning, I found a serious change for the worse. Symptoms of general peritonitis were rapidly developing, accompanied by a rising temperature and rapid wiry pulse. There had been diarrhoea during the night, and since my last visit a profuse purulent vaginal discharge tinged with blood had made its appearance. On vaginal examination the uterus was felt to be greatly enlarged, softened, and tender to pressure. The cervix uteri was swollen to twice its normal size. From certain new facts in the history of the case, I was enabled to infer the infectious nature of the vaginal discharge and the existence of septic metritis. Hot fomentations to the abdomen and antiseptic vaginal douches were ordered. The diet was restricted to peptonised liquids. Brandy, opium, quinine, and bismuth were given internally. During the day a rigor occurred, and the temperature for a short time stood at 104.5° . Slight diarrhoea continued, and there was retention of urine. In the evening I injected 3 c.cm. of antistreptococcic serum hypodermically. The condition of the patient prior to the injection was as follows: Tongue furred; breath offensive; temperature 101° ; pulse 116, small and thready; respirations 32 to the minute and entirely thoracic; abdomen distended, tympanitic, and tender all over; a slight swelling could be felt on light palpation in the left ovarian region. One hour after the injection the temperature was 98° and the pulse 92 and of better volume. The patient, who had hitherto been wakeful, now obtained two hours' good sleep.

On August 31st four injections of 3 c.cm. each were given, with the same favourable effect upon the temperature and pulse; the highest temperature was 100° , highest pulse 104. Slight diarrhoea continued, and vomiting occurred once. Retention of urine required the catheter once and then passed off; the urine was free from albumen. On placing the hand lightly on the surface, peritoneal friction could be detected over the whole of the abdomen. This sign persisted up to September 3rd, and I submit that it was of the highest importance as proving the universality of the peritonitis. From September 1st to September 3rd the injections of serum were continued, amounting in all to 35 c.cm. The symptoms and abdominal signs improved in all respects.

On September 15th the condition was as follows:—Tongue almost clean, pulse and temperature normal, digestive system in good order, abdomen resonant and supple all over, and moving well in respiration; there was no pain anywhere, but slight tenderness existed over left ovarian region; no swelling could be detected in any part of the abdomen; the vaginal discharge was free from blood, and was gradually lessening in amount. On vaginal examination, the cervix and body of the uterus were almost of normal size but were still slightly tender; the vaginal fornices were free from any depression.

On October 20th the patient was able to walk, and suffered no pain whatever; the discharge was very slight in amount.

REMARKS.—The injections were given beneath the skin of each of the limbs in rotation. On September 5th urticaria appeared at the site of each injection almost simultaneously but disappeared by September 9th. There was no other local reaction. The most immediate effect of each injection was slowing of the pulse with improvement in quality. In all probability but for the serum the case would have ended fatally, as without doubt there was an acute septic general peritonitis fully established at the time the injections were commenced. The serum was obtained from Messrs. Allen and Hanburys, and had been prepared by the British Institute of Preventive Medicine in July, 1896.