

CASE III.

G. B., a male, aged 55, had suffered from pain in his right iliac region for several months, probably more than a year. He had had difficulty in getting his bowels moved, and had lost weight. On examination of his abdomen a hard, irregular mass could be felt in the right iliac region. It was freely movable and was not tender. It was thought to be a carcinoma of the caecum. On October 5th, 1920, under chloroform and ether, the abdomen was opened by a vertical incision through the right rectus. The caecum, which was invaded by a carcinomatous growth, was removed with its mesentery, containing enlarged lymphatic glands. About 4 in. of the ileum and 4 in. of the ascending colon were removed. An end-to-end junction was made by simple suture with linen thread. I show the specimen removed, and you will notice that in this case also the growth was confined to the caecum, the appendix not being involved. The patient's after-progress was at first satisfactory. The sutures were removed from the abdomen on October 14th, when the wound was healed, with the exception of a sinus where the tube had been inserted. Three days later he began to fail, and he died of exhaustion on October 20th.

CASE IV.

R. P., a male, aged 68, had suffered from partial obstruction of the bowels for six weeks. The obstruction had been complete for a week. He had been vomiting for two days. The abdomen was tense and distended. Nothing could be felt. On October 11th, 1920, under chloroform and ether, a vertical incision was made through the left rectus muscle. On introducing the hand, a mass of new growth (carcinoma) was felt in the caecum. A Paul's tube was tied into the lower end of the ileum and about 50 oz. of foul-smelling intestinal contents drained off. The loop of intestine was fixed on the abdominal surface. The following day the patient was much improved, another 50 oz. of intestinal contents having drained away during the night. Chloroform and ether was again administered. About 12 in. of the small intestine was resected (including the aperture of the Paul's tube). The distal end was closed and returned to the abdomen; the proximal end was sewn into the transverse colon by simple suture with linen thread. I was unable to bring out the descending colon easily. The patient progressed satisfactorily for three days and then became weaker. His breathing was laboured, and he died on October 16th, at 11.45 p.m. There was no peritonitis and his abdomen was flaccid.

CASE V.

K. P., a female, aged 62, had had complete obstruction of the bowel for three days. The abdomen was distended. She had not vomited. On October 16th, 1920, under chloroform and ether, a vertical incision was made through the left rectus. On introducing the hand, a hard, annular stricture was found in the pelvic colon. It could not be brought outside the abdomen. A preliminary colotomy was performed on the descending colon and the bowel was opened immediately to give relief. On the 19th the patient was again placed under an anaesthetic and the colostomy was completed by division of the bowel. The result is satisfactory.

You will notice that four of these cases were of the columnar type and only one of the sclerosing form. In my experience the latter is more common. Three of the cases occurred in the caecum, one in the hepatic flexure, and one in the pelvic colon. In my experience the last named is more common, and it is usually of the sclerosing type. In some cases symptoms of sufficient importance are not noticed until obstruction occurs; even then the discomfort may not be great and it is often difficult to make the patient realize the danger he is in.

I have had the opportunity of observing several cases of this condition where operation had been refused or decided against. In each instance there was a perforation in about six weeks' time, accompanied by agonizing pain. One of the patients then begged me to perform an operation, which she had often refused previously. I washed out her peritoneum, stayed her agony, and enabled her to die in comfort. Another case I immediately relieved with an anaesthetic until the morphine had taken effect. All of these cases ruptured in the caecum.

In Case I there was a mass to be felt which appeared to be attached to his liver. His attendant, Dr. H. Miles, informed me after I had examined the case that he massaged this mass and it entirely disappeared. Perhaps if I had paid more attention to this information I might have suspected a collection in the bowel, which had been forced onwards. In Case II it was the tenderness and rigidity in her right iliac region which caused the patient to seek advice. It was a question between appendix trouble and gall stones. She was too rigid to allow of a proper examination, but when she was under the anaesthetic I had no difficulty in feeling a hard mass, which I diagnosed as a carcinoma of the caecum. In Case III there was a definite hard tumour to be felt in the iliac region. It was sufficiently well defined to allow of a

correct diagnosis, but the man was too far gone for cure to be possible. In Case IV a complete obstruction for a week, with its attendant toxæmia, suggested that the obstruction was in the proximal end of the large intestine, while in Case V the picture pointed to a stricture in the distal portion.

The operation is a serious one and its mortality rate is high, but the alternative is either death or an artificial anus. Every case must be decided according to circumstances. I can imagine that the continuation of life for a brief period may be so imperative that a colotomy should be chosen in preference to an enterectomy. Even then the major operation might be performed at a later date. Some people, I know, would prefer death to either a colotomy or a colostomy, and there is much to be said for their view. If the growth is too extensive for removal it may be possible to perform a short-circuiting operation. This will give immediate relief without the horrors connected with an artificial anus.

I think that if the facts are put fairly before patients they will, in the vast majority of instances, accept the operation which will remove their disease, no matter what the risk. Of course, a surgeon is often placed in the position of making the decision himself. In the first two cases noted above I did not suspect the real condition, and it was not until after the patients were under the influence of the anaesthetic that I was aware of it. In neither case had I any hesitation in resecting the bowel, and both of them have made satisfactory recoveries. Perhaps they may be as fortunate as the man upon whom I operated in 1911. It depends largely upon the duration of their disease. If we are to obtain good results, we must get the cases sufficiently early.

I have already said that the onset of the disease is insidious, and that the symptoms may be slight, but I have also said:

"If abdominal pain with irregularity of the bowels, which is persistent for more than twelve months, were looked upon as sufficient to justify an exploratory operation many of these conditions would be disclosed before it is too late to eradicate them."

This is a question which is in the hands of the general practitioner rather than of the surgeon. It is he who has to watch the onset, and if he can realize the truth of my assertion he will be in a position to put before his patients the advantage which may result from an exploratory operation performed before they have drifted into a condition which is beyond the stage of cure, if not of alleviation.

GUNSHOT INJURY TO THE BRAIN INVOLVING BOTH CORTICAL AND SUBCORTICAL TISSUE.

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THE medical profession is greatly indebted to Henry Head for his contributions to the symptomatology of disease. In his very able and philosophic writings on sensation, the outcome of many years' painstaking investigations, he has furnished us with criteria by means of which we can locate a lesion implicating any part of the afferent system, whether this be in the peripheral nerves, the spinal cord, the brain stem, the optic thalamus, the internal capsule, its afferent fibres, or the cortex. Obviously the practical value of such criteria is very great, for they enable us to determine the situation of a lesion which, from a consideration of the motor and other symptoms of a case, we may not be able to do with certainty.

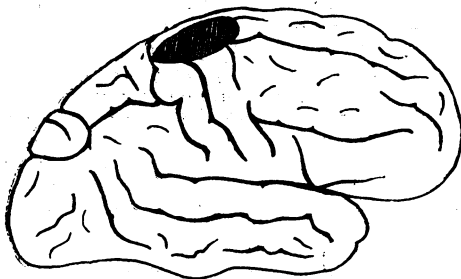
In some cases, however, when more than one part of the sensory system is affected, it may be difficult to decide from an examination of sensation which part is mainly involved. Thus, in the following case I have found it difficult to determine the extent to which the sensory disturbance is due to cortical or to subcortical destruction:

Private X., aged 32, was admitted to Brinnington Hospital on June 12th, 1920. At 9 a.m. on March 10th, 1915, he was shot in the head by a rifle bullet; he felt as if his head had been hit with a stick. He fell down, fancying "he saw little devils and that bells were ringing." He does not think he completely lost

consciousness, because he heard someone shout "stretcher-bearers." He was not, however, removed from the trench where he was shot till 7 p.m.; then he was fully conscious. He says that his right leg was crossed over the left, that both legs were useless, though he could move them very slightly. He could move his right arm a little, but was unable to move his left. The same night he was trephined; he does not know whether the bullet was found. His speech was impaired for about two months, and he had special difficulties with the letter "l." His right arm remained weak for about a month; his legs gradually regained some power, and by Christmas, 1916, he could feebly hobble about with the help of sticks. From March to June, 1916, he was in King's College Hospital, and later in King George's Hospital, where his head was x-rayed, but "nothing was found." He has been subject to attacks occurring every few weeks, which begin with a "filling-up sensation on the left side of the windpipe," then the left side of the mouth is puckered up and firmly closed; there is also slight twitching of the left side of the face; the mouth waters and he cannot speak for a few seconds; he does not feel confused. He says an attack lasts less than a minute; no attack has been seen since he came into the hospital.

Present State.

His present condition, six years after the injury, is as follows: His mental state, his speech, special senses, pupils, and the movements of his eyes are normal. The wound is represented by a lanceolate depression, 5 cm. in length and from 2 to 3 cm.



to the right of the middle line; its anterior end is 16 cm. from the nasion, its posterior 19 cm. from theinion. The deepest part of the depression, which is near the anterior end, admits the tip of a finger, and the pulsation

of the brain can be felt. In the accompanying diagram, kindly made for me by Professor Stopford, the probable position of the lesion is shown.

Motion.—The right arm and hand are normal. Some of the movements of the right foot are weak, and there is left hemiplegia. The weakness of the left side of the face is very slight. There is much rigidity of the left arm; the movements at the elbow and shoulder are strong, but weaker and stiffer than those of the right arm. The wrist is semiflexed, and his power to bend it more or to extend it is of the slightest. The hand is rigidly pronated, and he is unable to supinate it. The fingers, touching one another, are flexed at the two proximal joints and extended at the distal; the first joint of the thumb is slightly flexed, the second is extended, and the palmar surface of the end rests on the base of the terminal phalanx of the index finger. His attempts to move the digits are very feeble. The movements at the left hip and knee are good, but slightly weaker than those on the right side. Dorsiflexion of both feet is much impaired; that of the left foot is almost completely paralysed, that of the right foot is limited to a feeble inversion movement.

Reflexes.—Both knee-jerks are exaggerated, the left jerk more than the right. There is ankle clonus, most marked on the left side. Both plantar reflexes give an extensor response. The abdominal reflexes are feeble on the left than on the right side.

Sensation.—This is normal on the right side. On the left side gentle stroking with a wisp of cotton-wool is felt, but to a less degree than on the right side. The difference is scarcely appreciable on the face and trunk; sometimes he is uncertain, but his answers are usually in favour of the sensation being less plain on the left side. The difference, though still slight, is more distinct on the arms and legs, and is considerable when the fingers are tested. The ends of the fingers are most affected, and their palmar surface more than the dorsal, but his answers are inconstant; sometimes he feels gentle stroking, sometimes firmer stroking elicits no response. Tactile sensibility gradually improves in passing from the ends of the fingers to the wrist. Pressure touch over the fingers also seems to be diminished.

Localization, tested with a screen and observer's hand, is probably impaired, but the patient's indications are uncertain; sometimes they are correct, sometimes not—thus he may point to the fourth finger when either the second or the third is touched.

The appreciation of roughness appears to be normal, different grades being promptly recognized.

The vibrations of a tuning-fork are felt, but to a less degree than on the right side; they are felt two seconds longer on the joints of the right fingers, seven seconds over the styloid processes, and four or five seconds longer over the olecranon than over these prominences on the left side.

Compasses.—The threshold for recognizing two simultaneous contacts is probably raised on the left side: thus over the tips of the fingers it is 4 mm. on the right side and 5 mm. on the left; over the back of the forearm and the dorsum of the foot it is

2 to 3 cm. higher on the left side than the right. But the answers to this test are also uncertain; occasionally, indeed, a higher threshold is obtained on the right side.

Pain.—The prick of a pin is felt on the left side, but is less sharp than on the right side.

Pressure Pain.—The threshold, as measured with the algometer, is higher on the left side, the amount of pressure to evoke pain being ten on the left palm and seven on the right.

Thermal sensibility is not affected; he can distinguish cold from hot and also intermediate temperatures.

Position.—With eyes closed he cannot tell the position into which his arm is placed. In trying to touch the tip of one of his left fingers the normal finger goes usually to the ulnar side of the hand and sometimes to the base of the fingers and then gropes its way to the tip; occasionally it gets nearly to the tip at the first trial. The position of the fingers is often correctly imitated by the right fingers, but sometimes when the fingers, especially the second and third, are flexed, he thinks they are extended. He is apt to make mistakes as to the fingers moved; thus he may say it is the second finger when the third or the fourth has been moved. Slight passive movements of the fingers are not recognized, and large ranges of movement often elicit incorrect or uncertain answers.

The appreciation of weight is much impaired; with the right hand he recognizes that one ounce is heavier than half an ounce, with the left hand he does not appreciate any difference between one ounce and four ounces. The impairment is perhaps greater when the hand is supported than when unsupported. Curiously enough, he sometimes thinks the heavier weight is the lighter of two successive applications.

The appreciation of size, shape, and form is lost, and he is unable to name any common object, such as a knife, key, or coin, placed in the affected hand. He knows that something is in his hand, but cannot tell what it is. He does not feel any difference between a large watch and a florin, or between half a crown and a sixpence.

Texture is not appreciated; he does not feel any difference between silk, velvet, and flannel.

The main features of this case—namely, the hemiplegia and the hemianaesthesia—indicate a subcortical rather than a cortical lesion, whilst the paralysis of certain movements of the right foot shows that the lesion is not limited to the right cerebral hemisphere, but crosses the middle line to implicate the top of the left precontrol convolution or more probably the fibres proceeding from it.

The changes in sensation on the left side cannot, however, be wholly explained by a subcortical lesion. The uncertainty in the patient's responses to tactile impressions, to localization, and sometimes to the compass test suggests interference with the sensory activity of the cortex, which is still further indicated by the inability to recognize objects placed in his hand, combined with a loss of appreciation of weight. The loss of recognition of the posture of the affected arm—a striking feature of the case—may occur in subcortical as well as in cortical lesions, but in the former condition, Henry Head says, "the patient remains conscious of the existence of his limbs, though he does not know where they lie, whilst with lesions of the cortex he may lose all consciousness of the existence of the affected parts." I have found it difficult to make my patient appreciate the distinction. He says that on waking from sleep he does not know where his left arm is, but cannot say whether or not he is conscious of the existence of the limb.

THE SURGICAL TREATMENT OF CHRONIC SCIATICA.*

BY

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WHILE the majority of cases of sciatica can be cured by medical means there are still a certain number in which medical treatment fails. In these cases the patients are usually almost completely incapacitated by their pain and, if it is not relieved, they tend to drift into a condition of chronic invalidism. I am satisfied that, in a considerable proportion of these cases, a rapid and complete recovery can be obtained by operation. The benefits of surgical treatment have not been as widely recognized as they might, on account, I think, of two reasons: (1) a lack of appreciation of the type of case suitable for operation, and (2) the performance of an unsatisfactory operation—namely, nerve stretching. If the correct type of case is

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