A CASE OF SPINAL COMPRESSION LOCALIZED RADIOGRAPHICALLY BY SICARD'S METHOD.

(With Special Plate.)

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To the three cases of spinal compression localized radiographically after injection of lipiodol which were published recently by Mr. Percy Sargent,¹ it is of interest to add the case here recorded. This valuable method of diagnosis was used first by Professor J.-A. Sicard.²

Lipiodol.

Lipiodol is an oily substance of high specific gravity, chemically an additive compound of poppy-seed oil and iodine (40 per cent.), put up in ampoules. Owing to the iodide it contains, this substance is intensely opaque to x rays. X-ray examination will detect lipiodol in the tissues many months after injection as it does not easily part with its iodine content. For a similar reason it does not seem to cause injury to even the most delicate structures.

Technique.

By means of a suboccipital puncture³ 1 c.cm. of the lipiodol is pressed from a glass syringe through an ordinary lumbar-puncture needle into the spinal theca. Within the subarachnoid space the heavy oily drops obey the laws of gravity, and, if the patient is put in the sitting position, they fall slowly to the bottom of the thecal "test tube," where they collect. The normal radiographic shadow is then seen. It is bullet-shaped at the level of the second sacral spine (Fig. 1). But if a block exists in the spinal theca the lipiodol is there held up, and the lower limit of the shadow indicates the upper limit of a pathological narrowing of the spinal canal (Fig. 2).

Since the oil travels slowly down the subarachnoid space the best pictures are obtained at least twenty-four hours after the injection, when the substance has become "fixed" at the site of the block.

When demonstrating the upper limit of the compression, the x-ray couch is tilted so that the patient's head is higher than his feet. To determine the lower limit of the compression, injections have been made below the lesion and the patient x-rayed in the inverted position.

William W., aged 38 years. An intradural fibroma compressing the cord at the level of the seventh thoracic segment was diagnosed.

At operation on June 29th, 1923, so exact had been the radiographic findings that although only three laminae were removed the tumour was discovered in roughly the centre of the exposed portion of cord, pressing backwards upon its antero-lateral aspect on the right side. The mass was removed, and the patient, previously completely paraplegic, is now slowly recovering the use of his lower limbs.

From the neurological findings alone one would have hesitated at a stage when operation was feasible to assign a precise level to the obstruction. The radiographic examination at once settled the exact level of the lesion in relation to the vertebrae.

The patient is under the care of Sir James Purves-Stewart and Mr. Wilfred Trotter, whose permission to publish the case we here gratefully acknowledge.

REFERENCES.

- ¹ Sargent: BRITISH MEDICAL JOURNAL, August 4th, 1923.
- ² Sicard et Forestier: *Revue Neurologique*, 1921, vi, p. 1264. *Bull. et Mém. Soc. Méd. des Hôp. de Paris*, 1922, No. 10, p. 463.
- ³ Ayer, J. B.: *Arch. Neurol. and Psych.*, Chicago, 1920, iv, 529-541.

SOME REMARKS ON GALL STONES.

BY

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A YEAR or two ago, at a meeting of the Worcestershire and Herefordshire Branch of the British Medical Association, I showed some specimens to illustrate unusual cases of gall stones. Most surgeons who have had a long experience of such operations have removed stones by the hundred. I once heard of a thousand, but was sceptical until in May,

1921, I operated upon a female aged 27; the diameter of the stones removed varied in size from about 1 inch to about 1/32 inch. The gall bladder was not large enough to contain them; its liver surface had disappeared and the stones were lying in a cavity formed by a depression in the liver substance and the under portion of the gall bladder. Some of the stones were lost during the operation, but those saved and counted numbered 3,370. The patient made an uninterrupted recovery.

In July, 1915, I was asked by Dr. Brocket of Stourport to see with him a man aged 73. The patient had a large meal of bacon, broad beans, and young potatoes on July 17th. In the evening he was seized with abdominal pain and vomited. On the following day Dr. Brocket found a small ventral hernia, which he reduced. The patient continued to vomit and had no action of his bowels until I saw him late in the evening. He was tender on pressure over the epigastrium; there was no rigidity and no increase in the rate of the pulse.

I advised his removal to hospital the next morning. He was so much more comfortable on the morning that his admission was delayed until July 21st. He was then suffering from peritonitis. On the abdomen being opened there was an escape of bile, and hundreds of small biliary calculi, about 1/16 inch in diameter, were found scattered in the cavity of the peritoneum. There was a rent about 1½ inches long in the gall bladder. The patient died shortly afterwards. There was no history of any injury. This is the only case of spontaneous rupture of the gall bladder that I have seen, and I cannot find any record of one.

According to Pinardi¹ (November, 1920) "the diagnosis of intestinal obstruction due to gall stones has hardly ever been made before operation, as there are no pathognomonic symptoms. . . . This variety of intestinal obstruction, though known for a long time, is relatively infrequent." Pinardi himself found only three cases due to this cause out of over 400 operated on for intestinal obstruction at a hospital at Turin. He says: "The condition is most frequently, if not exclusively, found in persons over 40, especially of the female sex. The most frequent site of obstruction is the lower end of the ileum."

My cases support this view. All the patients were females over 40; the stones were found three times in the ileum and once in the rectum. This probably depends upon the course they take, and the course followed by large gall stones is a varied one.

In the first case of the kind I met with the stone was impacted in the ileum of a lady aged 67. It weighed 285 grains. The patient was suffering from acute obstruction of the bowels. I opened her abdomen and excised the calculus, which was impacted in the ileum within 12 inches of the ileo-caecal valve. The operation was performed in 1901, and the lady is still alive and well.

Another case was a woman aged 78. This stone also was impacted in the ileum within 12 inches of the ileo-caecal valve and was causing acute obstruction of the bowels. I opened the abdomen and excised the stone, which weighed 240 grains.

A third case of exactly the same nature occurred in a woman aged 57, who was suffering from acute obstruction of the bowels. I opened the abdomen and excised the calculus from the ileum within 12 inches of the ileo-caecal valve. It weighed 250 grains.

These last two cases occurred within four days of each other; the one operation was performed on November 21st, the other on November 25th, 1920.

In another case I found a stone impacted in the rectum of a lady aged 52. It had to be broken up before it could be passed; the portions saved weighed 170 grains. It is probable that the calculus had ulcerated its way from the gall bladder to the large intestine, as it is unlikely that it would have passed the ileo-caecal valve. Another large calculus, weighing 150 grains, I discovered in the gall bladder of a lady aged 54. The gall bladder had become adherent to the anterior abdominal wall and the stone was ulcerating its way out towards the surface.

Another stone, not so large as those previously mentioned, but weighing 80 grains, was found by me in a lady aged 54, between the gall bladder and the transverse colon. Their walls had become adherent and ulcerated, so that the calculus was passing between them.

REFERENCE.

- ¹ Pinardi: BRITISH MEDICAL JOURNAL, Epitome, January 22nd, 1921, para. 118.

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FIG. 1.—Normal radiogram. Lipiodol shadow at level of sacral second spine—that is, termination of spinal theca.

FIG. 2.—William W. Radiogram showing shadow of lipiodol. A piece of lead (X¹) marks the lower limit of the shadow at the level of thoracic fifth spine—that is, the uppermost limit of the tumour. Some of the oily drops appear below the level of the obstruction.

DAVID CAMPBELL: THE HIPPOCRATIC FINGERS.

FIG. 1.—Clubbed finger. (× 4.)

FIG. 2.—Normal finger. (× 4.)

FIG. 3.—Nail-bed, clubbed finger. (× 20.)

FIG. 4.—Nail-bed, normal finger. (× 20.)