A METHOD OF OBTAINING RAPID HEALING OF ACUTE ABSCESES.

By JAMES PHILLIPS, F.R.C.S.ED.,

SENIOR ASSISTANT SURGEON TO THE BRADFORD ROYAL INFIRMARY.

FOR seven or eight years past my partner, Dr. Handcock, and I have been treating acute abscesses systematically by a method which, although not at all original, has probably been used more regularly by us than by most medical men; it possesses advantages which perhaps make it worth while to describe it here.

The method is based on the theory that if all the dead material in a localized abscess is removed, and means taken to prevent the collection of further dead material in the abscess cavity to act as a culture medium, rapid healing will take place.

"In union by the first intention," says Erichsen, "after the surfaces of the wound are brought into apposition and put at perfect rest, every source of infection is absent, and consequently inflammation, with its accompanying exudation, ceases as soon as the injured tissues have recovered from the . . . injury. In wounds which unite by granulation there is always some source of irritation present which continues to act for a considerable time after the injury, and thus gives rise to a prolongation of the inflammatory process with the formation of pus."

My contention is that in almost every case of acute abscess there need not be left any "source of irritation" to "continue to act for a considerable time" and that unless dead bone or some other irremovable irritant is present, something not unlike primary union can be obtained.

METHOD.

1. Cleanse the skin as in operating on sterile tissues.
2. Make an incision long enough to permit of the pus being freely evacuated and the pyogenic membrane rubbed clean and smooth with gauze wrapped round the finger.
3. Having emptied the abscess cavity as completely as possible, pack it tightly with gauze (we use 1 in 1,000 mercury perchloride gauze, dry) and apply a wool dressing and bandage as firmly as possible.
4. At the end of forty-eight hours remove the packing and dress the wound as if it were a simple incision; that is, do not pack or drain at all, but simply fix a gauze and wool dressing firmly in place with a bandage. This dressing will require changing only once in three or four days until the incision is soundly healed, and it will be found that the sides of the abscess cavity unite promptly and that there is no outpouring of pus from it. From the time when the packing is removed it is practically a simple incised wound that is being treated.

Illustrative Cases.

CASE I.—In January, 1907, I was asked to see the sister of a medical man, who, following influenza with throat symptoms, had developed an abscess in the neck. Under ether an incision was made in front of the sterno-mastoid, and on burrowing beneath that muscle two or three ounces of pus were evacuated. The cavity was rubbed clean with gauze and packed tightly. Two days later the packing was removed and a superficial dressing was applied. The temperature never rose after the operation; the patient almost at once felt quite well; there was never any discharge of pus and the incision healed quickly and perfectly.

CASE II.—Mrs. W. was seen on May 9th, 1907, and then had a right mastitis, and as on May 16th there was certainly pus present, the breast was incised under ether, the pus let out, loculi broken down, all debris cleared out, and the cavity packed tightly. The temperature at once dropped from 103° to normal, and did not rise again. The packing was removed on the second day and a simple dressing applied. Next day the patient was attending to her household duties with her right arm in a sling; she felt well, and was eating ordinary diet. The wound was looked at two or three times until the incision was firmly healed.

CASE III.—Mrs. G., who had suffered from anal pain for several days, was found on October 20th, 1907, to have a perirectal abscess. Under ether the sphincter ani was stretched, and the abscess found to extend upwards some 2 in. or 3 in., burrowing between the rectum and vagina. It was opened by dividing the sphincter freely, cleaned and tightly packed. On going to remove the packing forty-eight hours later, it was found that the patient had had a motion and that the packing had come away. No more packing was used, but a daily sitz bath and a perineal pad of boracic wool were ordered. On examining the parts on the ninth day, the cavity was found to be completely closed, and only a superficial

ulcer, about 1½ in. by ¼ in., remained, which had healed in another week. The patient was in bed only six days after the operation.

CASE IV.—In cases of small abscesses, general anaesthesia is not required. Mr. C. attended at the surgery on November 28th, 1907, with an ulcer inside the left cheek, produced by the sharp edge of a carious tooth. The skin of the cheek was red and indurated. The tooth was removed and the ulcer soon healed, but a small abscess developed and pointed externally. On December 7th, 1907, the skin was cleaned and anaesthetized with a streak of pure carbolic acid and incised. The pus was squeezed out and the cavity packed with gauze, which was fixed with strapping. The gauze was removed after forty-eight hours and not replaced, but a simple gauze dressing was applied, which was changed by the patient every morning after his toilet. There was no discharge, and the incision was soundly healed in a week.

At my suggestion, the infirmary residents have treated cases similarly. Here are notes of two cases.

CASE V.—E. B. was admitted to the infirmary on November 4th, 1907, suffering from an acute glandular abscess in the femoral region. Mr. McEwan incised it, rubbed it clean with gauze and packed it tightly. Two days later the packing was removed and a simple dressing applied. Practically primary union took place, the incision being looked at only on two other occasions—namely, November 13th and 15th. The patient was up on November 20th, and after the first dressing the temperature never rose above 99°, or the pulse over 84.

CASE VI.—Mrs. C. was admitted to the infirmary on January 6th, 1907, under the card of Mr. Horrocks (whom I have to thank for permission to quote the case). She was suffering from puerperal pyaemia; her temperature was 102.2°, and pulse 118. Both forearms were red and swollen, being practically bags of pus. There were similar but smaller abscesses over the left tibial tuberosity and the left buttock. Under ether Mr. McEwan evacuated all these and scraped them out with gauze and tightly packed them. His note says "the amount of pus evacuated was remarkable for its quantity." The packing was removed two days later (January 8th). On January 10th another abscess formed, and had to be emptied and packed. Mr. McEwan appears from the notes to have repacked the abscess cavities every second day for some time, which I think was probably unnecessary; but, even so, the patient was disturbed only once in forty-eight hours instead of every four hours, as in the treatment by fomentations. From January 26th, when the septicaemia appears to have expended itself, the temperature remained about normal, except for a couple of days after the patient was allowed up. She was discharged cured on March 16th.

We claim for this method that it results in rapid healing; that constitutional symptoms are got rid of almost at once; that as the dressing requires doing so seldom the doctor can do it himself and so avoid the risk of a secondary mixed infection, of which one has seen some ghastly examples where the patient's friends have been doing the dressings; and that it effects quite a marked economy in dressings—just think what amount of dressings would have been required had the pyaemic patient I have quoted been on four-hourly fomentations instead of the dressings which were used!

TUMOUR OF THE ORBIT REMOVED WITHOUT ENUCLEATION AND WITHOUT LOSS OF SIGHT.

By G. APTHOMAS, M.B.,

OPHTHALMIC SURGEON, MANCHESTER EYE AND EAR HOSPITAL, AND OLDHAM AND ASHTON INFIRMARIES.

As the reported cases of removal of tumours from the depths of the orbit without enucleation and without removal of the outer bony wall of the orbit (Krönlein's operation) are rare, and with the retention of useful vision still rarer, the following case is of some interest.

History.

Mrs. G., aged 24, married, consulted me in November, 1895, on account of gradually-increasing prominence during the previous three years, with loss of sight, of the right eye. Her general health was good. There was no history of injury, no pain or tenderness, no enlargement of the thyroid gland nor of any of the cervical glands, no bruit, no cardiac signs; the pulse was normal. There was well-marked proptosis of the right eye, the eye being pushed directly forwards. The movements of the eye were fairly free in all directions, and the lids just able to close over the cornea. Pupillary action was normal. Right vision was reduced to perception of shadows. Left vision ½ and J. 1.

Ophthalmoscopic examination showed the media clear and some congestion of the optic disc. The field of vision was not taken.

The patient did not consult me again until March 18th, 1902 (six and a half years later), when she complained of increasing prominence of the eye. Since 1895 she had been under treatment at various eye institutions and had been told the eye would have to be removed. The sight had improved since the former consultation. R.V. = $\frac{3}{8}$ c. + 2 D. = J. 4; L.V. = $\frac{3}{8}$ and J. 1. She was extremely anxious to save the eye, although her present condition made it impossible for her to go out and enjoy the society of her friends. I got leave to do what I thought prudent.

Operation.

On March 23rd, 1902, the patient being anaesthetized by Mr. F. Falconer, M.B., I slit up the outer canthus of the proposed eyeball to its full extent, that is, to the bony boundary of the orbit. The conjunctiva was incised horizontally, and separated above and below. The external rectus was next divided some 5 or 6 mm. from its insertion and thrown back. On passing a finger into the orbit behind the eyes, a mass of soft tissue was felt on the outer side. Through this the tip of the finger was forced, and long shreddy strips of soft granulation tissue were torn away. The haemorrhage was free. After the removal of this tissue the finger came on a well-defined lump of firmer consistency with a smooth surface, which resisted attempts to free it. It extended towards the apex of the orbit in close contact with the lower and outer side of the sheath of the optic nerve. With the tip of the finger and the help of a blunt dissector and patience, the tumour, which was fully encapsulated, was separated and removed without tearing its capsule. It had no pedicle. During these manoeuvres the eye was drawn forwards and upwards, and every care was taken not unduly to press on it. The orbit was washed out freely with warm perchloride of mercury lotion (1 in 6,000), and all haemorrhage stopped; the parts were replaced, and approximation of the cut ends of the external rectus was attempted, a matter of difficulty, owing to the collapse of the orbital tissue.

After-History.

The after-history of the case was uneventful. In April, 1905 (three years after the operation), there was no proptosis. R.V. = $\frac{3}{8}$ and J. 4 at 6". L.V. = $\frac{3}{8}$ and J. 1. There was some paresis of the right external rectus and slight convergent strabismus and enophthalmus. Since the operation the patient says her health has been better, and she is no longer troubled with headaches or dizzy feelings, which were constant before.

When seen in July, 1907, she remained quite well, and there was no sign of any recurrence.

PATHOLOGICAL REPORT.

The tumour was sent to Professor Delépine, Victoria University, and examined by Professor Delépine and Dr. Arthur Sellers. The following is the report:

The tumour was about the size of a pigeon's egg, and had a fairly distinct capsule. The surface was smooth, dark brownish-red in colour, with several small areas more deeply pigmented. It was generally soft to the touch, but at one end there were several somewhat hard nodules about the size of a pea. On section at one end there was seen a cyst containing blood. The rest of the cut surface was composed of strands of tissue with small intervening spaces filled with blood.

On microscopical examination the cavernous spaces were seen to be very irregular in size, and to have thin walls with a lining of endothelial cells. The stroma was very abundant, part of it in a state of hyaline degeneration. The connective tissue round many of the spaces was very cellular, and there were several masses of lymphoid tissue, some of them forming a sheath to small vessels. The majority of the connective tissue corpuscles, connected with fibrous bundles, contained large, pale, irregular pigment granules. These granules were very numerous round some of the vessels. They appeared to be derived from the blood.

The tumour has the structure of a cavernous angioma. There is no clear evidence that it is angio-sarcomatous. Considering its slow growth the tumour, if malignant, is of low malignancy, though some of the cellular patches are indistinguishable from a round-celled or lympho-sarcoma. Nests of embryonic cells are, however, not uncommon in angiomatous tumours, which are frequently of congenital origin, so that, though the prognosis should be guarded, it need not be unfavourable.

A communication by J. Herbert Parsons on Primary Extra-dural Tumours of the Optic Nerve is published in the *Transactions of the Ophthalmological Society*, vol. xxiii, 1903, p. 117, and includes an abstract of eighteen cases and a bibliography.

ACCORDING to the German *Universitäts-Kalendar* the number of medical students in the several universities of Germany during the summer semester of 1907 was as follows: Munich, 1,248; Berlin, 876; Freiburg, 645; Leipzig, 498; Würzburg, 449; Heidelberg, 397; Kiel, 340; Marburg, 291; Bonn and Breslau, 277 each; Jena, 275; Tübingen, 242; Strassburg, 233; Königsberg, 216; Halle, 210; Greifswald, 201; Erlangen, 199; Göttingen, 176; Giessen, 173; Rostock, 122.

APPENDICITIS COMPLICATED BY HEPATIC ABSCESSSES.

By GEORGE P. BLETCHLY, M.B.LOND., M.R.C.S.ENG.,
L.R.C.P.LOND.,
NAILSWORTH, GLOUCESTERSHIRE.

THE following case of appendicitis presented certain unusual features which render it worthy of record:

Previous History.

On April 14th, 1906, I was called to a well-developed man, aged 48, who had felt "chilly" the previous day, and who during the hot weather of the preceding week had on several occasions got very hot cycling. He had had "dysentery" ten years before, but no other serious illness.

History of Illness.

He looked slightly yellow and complained of vomiting; the temperature was 99.6° F. He was sent to bed and put on light diet and given 5 grains of calomel that night. Next morning he was downstairs, and his temperature normal, but his sister (a nurse) informed me that he had had a rigor during the night and his temperature had gone up to 106° F. The vomiting had lessened, and on examination there was no evidence of tenderness. He was sent back to bed. He had a rigor that night, and his temperature rose to 104° F. just after. He was given quinine in 3-grain doses four-hourly.

On April 17th I witnessed a rigor; it lasted a quarter of an hour, and during it the temperature rose rapidly and continued to rise for a quarter of an hour after, finally reaching 105.6° F. I then found a slight ridge 2 in. long and $\frac{1}{2}$ in. broad lying obliquely about one fingerbreadth internal to the right anterior superior spine, and best felt by standing on the right side of the patient facing his face and using the ulnar border of the left hand. It was slightly tender, and the tenderness was relieved after examination.

On April 18th the late Mr. F. W. Storry of Stroud kindly saw him with me, and we could find no physical sign except the ridge, but the jaundice was slowly increasing. After this date the rigors temporarily ceased and the ridge became more superficial and larger, but I could make out no fluctuation. The temperature varied between 102° and 103° F.

Operation.

On April 22nd (eight days after the first rigor), as the temperature still kept up and the ridge was getting still more distinct, Mr. Storry operated. A small abscess containing very offensive pus was opened; the appendix, which was much thickened, was removed, and on opening it the mucous membrane looked very unhealthy, and was "shed" in places. A small perforation was found just on the distal side of the ligature, which was tied round the stump, as, owing to its thickened condition, it was impossible to suture it in the usual way. The patient stood the operation well, and that night his temperature fell.

After-History.

On April 25th he had a rigor, the first since April 18th, and on April 26th, Mr. Carwardine of Bristol kindly saw him with Mr. Storry and myself. He agreed with us that the case was probably one of pyaemic liver abscess, but said that the presence of a pocket of pus shut off from the rest of the abscess cavity could not be altogether excluded, especially as he thought that, per rectum, there was slightly more resistance on the right side than on the left, and that the patient should have the benefit of the doubt.

Accordingly, the next morning we explored the wound under an anaesthetic, but found no pus in loin or pelvis. Two large drainage tubes were inserted, the one towards the loin, the other towards the pelvis; and he was given daily 30 c.cm. of antistreptococcus serum (B. and W.) by hypodermic injection. On April 28th the quinine, which had been left off since the operation, was resumed.

The jaundice lessened, but varied a good deal; the rigors persisted daily, till on May 1st, I have a note, 3 p.m.: "Sweating—possibly in lieu of rigor," and after this he had no more rigors for ten days. They then returned, but there was no enlargement of the liver nor tenderness over it. The skin then began to show signs of oedema.

On May 17th diarrhoea set in; the motions were reddish, and a report by the Clinical Research Association says of the faeces: "No pus detected, but specimen contains a marked excess of unaltered fat." Hiccough also began and was troublesome for a week.

On May 19th he began vomiting dark matter, and, still thinking of liver pus, I had the vomit examined; but it was probably only a symptom of the septicaemia, for the report of the Clinical Research Association was: "The vomit contains much altered blood, of which the remains of the corpuscles are still visible. There are also streaks of mucus containing abundant leucocytes. There is no evidence of liver pus, but we doubt if it could be detected unless present in very large amount."

The antistreptococcus serum was omitted on June 1st, as it was not thought to be doing any good, and on