Medical Memoranda

Staphylococcal Septicaemia treated with Penicillin

The following record of a case of septicaemia which responded to treatment with penicillin may be of interest.

CASE HISTORY

The patient, a lance-corporal aged 21, had been treated for sinusitis two months before the present illness, and had had several examinations on account of chronic cough; these were Tb.-negative. Two weeks before admission to hospital he had had a boil on the neck, which healed on being opened and drained. Five days before admission he reported sick with acute pain over the right sacro-iliac region. There were no other symptoms, and no pyrexia. He was treated at home with local heat. An unusual feature was the extreme tenderness. Just before admission to hospital his temperature was 102° and the pulse 107. There was oedema of the right buttock and slight diarrhoea.

On Nov. 22, 1943, at 6 p.m., the patient was admitted to the Royal Hospital, Richmond. His temperature was then 103° and the pulse 120, and he complained of severe pain in the right buttock and the right shoulder. Aspiration of the buttock yielded a few cubic centimetres of thick pus, which proved to contain *Staph. aureus*. Sulphathiazole 2 g. was given three-hourly for 3 doses, followed by 1 g. four-hourly. Culture of blood collected at 5 p.m. on the next day gave a heavy growth of *Staph. aureus*.

On Nov. 23 deep abscesses of the buttock and the supra-acromial region were opened and drained. The patient's temperature was still raised and his general condition poor. Sulphathiazole administration was continued until 2 a.m. on the 24th. The concentration of drug in the blood was very low (between 1 and 3.5 mg. per 100 ml.). The white cells numbered 25,000 per c.mm.

At 10 p.m. on Nov. 24 treatment with penicillin started with intravenous injections of 15,000 units (2.5 c.cm.) three-hourly. The white cells were reduced to 17,600 per c.mm. On Nov. 25 the temperature was still swinging between 100 and 103°. His general condition, however, had slightly improved, with 14,000 white cells per c.mm. and 70% haemoglobin. A transfusion of one pint of stored blood was given on Nov. 26. The abscesses continued to drain, and the patient's condition was slightly better.

On Nov. 27, at 10 p.m., penicillin was discontinued after a total dose of 360,000 units had been given. On the 29th blood culture was sterile, and next day the temperature was normal. Further progress was uneventful. At the patient's discharge on Dec. 20 his general condition was good and the abscesses had healed.

All laboratory investigations were carried out by Miss Sheila Newstead, M.R.C.P.

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Rupture of the Rectus Abdominis Muscle during Pregnancy

In the *Journal* of July 31, 1943 (p. 136) there is an account by Rufus C. Thomas of a case of rupture of the rectus abdominis muscle during pregnancy. As I had such a case in 1937 I send a short account, since I feel that the rarity of this misadventure warrants publication.

The patient was a woman 30 years of age who was at term with her sixth pregnancy. Her obstetric history was entirely satisfactory, and the existing pregnancy had been attended by no untoward circumstance. She was admitted to the Dunedin Hospital on Aug. 16, 1937, complaining of spasms of epigastric pain for the preceding 24 hours, which had been replaced by a constant pain on the left side of the abdomen that was aggravated by movement. The pains did not resemble labour pains. She had suffered from a cold for about three weeks and severe cough with vomiting for three days before admission.

On examination she appeared to be a healthy obese woman with no signs of constitutional disease. Abdominal examination, hindered by a heavy overburden of fat, revealed two tumours of approximately equal size and symmetrically occupying the right and left halves of the abdomen from the pubes to the costal margins. That of the right was the uterus containing a foetus at term in the R.O.A. position and alive with satisfactory heart sounds. The left tumour was diagnosed as an ovarian cyst which had either rotated its pedicle or into which a haemorrhage had occurred; a definite fluid thrill was elicited. This seemed a reasonable diagnosis, although it may possibly have been influenced by the fact that a pregnancy with a large ovarian cyst had been dealt with in the hospital a few weeks previously.

The abdomen was opened in the midline below the umbilicus. The left-hand tumour was found to be a very large haematoma between the peritoneum and the anterior abdominal wall. It was as big as the pregnant uterus, which was displaced to the right. Fortunately the incision just missed opening the haematoma, which was left alone. The foetus was delivered by a classical Caesarean section in a state of asphyxia livida, from which it rapidly recovered. Convalescence was quite satisfactory, and 14 days after the operation the haematoma could still be palpated, but it gradually and completely absorbed.

This case was one of rupture of the left rectus abdominis muscle as the result of coughing and vomiting, but it differed from most of the reported cases in that there was at no time any anxiety about the patient. There were no signs of secondary anaemia in spite of the size of the haematoma: on admission the patient's temperature was 98° and her pulse 100. The operation, performed under gas-oxygen anaesthesia, was uneventful and the child robust and healthy.

In 1939, two years later, another pregnancy occurred, which proceeded to uneventful delivery at term after the appearance of mild toxæmic symptoms during the 40th week.

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Actinomycosis treated with Sulphapyridine

The following is the history of another case cured, apparently, with sulphapyridine.

CASE RECORD

In March, 1942, a farm labourer aged 20, a particularly healthy individual, developed a swelling in the left masseteric region on the cheek which spread through the substance of the cheek to the lower alveolus in the region of the second premolar and first molar teeth. The diagnosis of actinomycosis was proved beyond doubt by recovering the organism from a little pus obtained from a small incision in the cheek. Radiographs confirmed the fact that the bone (mandible) was involved.

Treatment with Lugol's iodine, on the advice of Prof. Grey Turner after being kindly approached on the subject by Mr. Eric Young, was started in March, 1942, and was continued in increasing and heroic doses to May, 1942. As the swelling did not subside he had a course of x-ray therapy in June and July, 1942; but his condition continued to deteriorate, and the x-ray therapist finally stated that it could not be overcome by x-radiation, and advised surgical measures. By this time the patient could barely open his mouth, and the swelling was very large externally, with two discharging sinuses above the angle of the left mandible.

Before resorting to surgery, however, it was decided to try the effect of Lugol's iodine again, and he continued to take this from Aug., 1942, to Aug., 1943. While on the iodine his swelling greatly subsided and he was much more comfortable, the impression being that the condition was kept under control but not cured. On two occasions he developed symptoms of iodism, and the drug had to be stopped temporarily. The iodism rapidly cleared up, but the swelling developed again in an alarming fashion each time, with recurrence of discharge from the sinuses. Even while on the iodine he would have periods of a few days when one of his sinuses would discharge a little. It therefore became obvious that complete cure could not be expected from iodine.

In the *British Medical Journal* of July 24, 1943 (p. 106), I read a report by Dr. A. McCloy of a case cured by sulphapyridine. Now, during the interval between the employment of x rays and starting iodine again I had experimented with sulphapyridine, using the heavy dosage given for severe infections, and with no apparent response. I observed, however, that Dr. McCloy had used a rather different method of administration. His scheme of dosage was:

2 tablets four times a day for four days.
No tablets for four days.
2 tablets four times a day for four days.
No tablets for four days.
2 tablets four times a day for four days.

This scheme was therefore adopted in this case, and met with a triumphant success. Treatment was started on Aug. 11, and finished on Aug. 30, by which time all swelling had gone and he could open his mouth naturally. He has had no recurrence of swelling since then.

Perhaps it may be said that it is too early to count on a definite cure, but I feel the case ought to be reported in order to establish the effectiveness of Dr. McCloy's scheme of treatment. It seems that the method of administration is important in this disease and that cure can be obtained if the correct dosage is given. Evidently for a chronic infection of this type it is necessary to give, not a high dosage over a short period, but a smaller dosage over a prolonged period.

In the Medical Research Council's War Memorandum No. 10—*The Medical Use of Sulphonamides*—the following statement appears at page 33: "Actinomycosis cases have been reported which apparently responded rapidly to sulphonamide therapy. . . . Other observers have failed to confirm this response, and they prefer treatment with potassium iodide and x rays. Further experience would be valuable. If sulphonamides are used, large doses of sulphathiazole or sulphapyridine should be given, as for a severe infection."

If any apology is needed for reporting this case so fully, I feel the answer lies in the fact that this gives a little more experience, and negatives the suggested dosage given by them.

I would like to thank Mr. Eric Young, Dr. C. Bellamy, and Prof. Grey Turner for their kind help in this case.

Leck, Staffs.

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