indurated mass thought to be due to chronic oedema. The omental swelling was about 10 cm. in diameter and appeared to be of a chronic inflammatory nature. The cause of the lesion remained obscure until, on exploring the omental mass, a sliver of bone was found buried in it near that aspect of the mass which had been apposed to the abdominal wall. There was no pus present. The bone was removed and the abdomen closed.

The bone was found to be about 3 cm. long, with a diameter of 3-4 mm. at its middle; it tapered to points at both ends.

The patient has remained well since. He had no knowledge of having swallowed the foreign body, which is believed to be a fragment of rabbit bone.

CASE 2

A man aged 41 was admitted as an emergency case in August, 1950, complaining of severe hypogastric pain. One week before admission he started to have abdominal discomfort. Four days before admission this had become worse, especially before and during micturition. He had had frequency of micturition for two days. A few hours before admission he had a sudden urgent desire to micturate, but had been unable to do so. This was followed by severe lower abdominal colic and rigors, which caused him to come to hospital. Up till then he had not vomited, but after admission he brought up a little bile-stained fluid. His bowel habits had been regular. He had been working until the day of admission. There was no antecedent history of significance.

When examined he was in severe pain. He had a pyrexia of 101° F. (38.3° C.) and a pulse rate of 100. His tongue was heavily furred. There were signs of lower abdominal peritonitis. Tenderness was slightly more marked on the left than on the right. No mass was identified, but rigidity made deep palpation impossible. On rectal examination there was pronounced tenderness in the recto-vesical pouch but no palpable mass. The urine was normal.

The abdomen was opened by a right lower paramedian incision a few hours after admission. There was lower abdominal peritonitis. The cause of this was rupture of a small abscess around the pelvic colon. Omentum and bladder as well as colon were involved in the inflammatory mass. Bladder and colon were separated from the mass without difficulty, and no lesion of either viscus was found. The lesion appeared to originate in the omentum, as in Case 1. A purposive search was now made for a foreign body, and one was found in an abscess cavity in the omentum containing a few millilitres of pus. The foreign body was removed and the abdomen closed.

The patient made an uneventful recovery. He had no recollection of having swallowed the foreign body, which is believed to be rabbit bone. The histologists were unable to identify it with certainty. The piece of bone was 2½ cm. long and sharp at both ends. Its middle was flattened and 2-3 mm. wide.

COMMENT

Some idea of the frequency of such perforation of the bowel may be gained from Perslow's (1935) finding of seven such cases among 225 patients admitted to hospital having swallowed foreign bodies. These cases occurred among 320,000 admissions to seven large Swedish hospitals over a 20-year period. Each of Perslow's seven patients came with peritonitis.

The first case recorded above is unusual in that it presented as a chronic lesion. It is assumed that the bowel through which the bone had passed was the caecum. Rather surprisingly, this is a common site for perforation to occur in, although no part of the alimentary tract is exempt.

At operation the striking fact about both of the above cases was that the omentum appeared to be the centre of the lesion. Even in the relatively acute Case 2 the walls

of the pelvic colon and bladder seemed to be only secondarily involved. There was no trace of the site of perforation, although this was searched for in the neighbouring colon. This omental protection was commented on in a paper by Watson (1915), who remarked that it occurs in many cases before the actual perforation. He gives no evidence for this statement, but the comparative mildness of the early symptoms in the present cases suggests rapid localization of the inflammation after perforation.

It is probable that the mechanism of perforation in these two patients was that a sharp end of the bone first pricked the mucosa of the intestine and stuck. The resulting irritation set up inflammation in the overlying visceral peritoneum and caused adhesion of omentum to the site. The oedematous area of bowel stimulated vigorous peristalsis, which, since it failed to dislodge the bone, brought about complete perforation of the bowel and completed the extrusion of the foreign body from the gut. The omentum was already in position to "take up" the extruded foreign body and localize the peritonitis. In Case 1 the protective process was completely successful, and no doubt the bone would eventually have found its way through the abdominal wall.

In Case 2 it is assumed that involvement of the bladder in the "walling off" mechanism resulted in a breakdown of the defences when the bladder contracted violently in an effort to empty itself. The severe pain of general lower abdominal peritonitis came on when the patient was trying to micturate, about a week after his first abdominal symptom.

I wish to thank Mr. J. B. Haycraft for permission to publish details of these two cases.

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Subacute Inversion of the Uterus Treated with Aveling's Repositor

Acute inversion of the uterus is uncommon, and it is impossible for anyone to gain very much experience in the management of these cases. The following case presented itself as a subacute complete inversion of the uterus. It was first seen and diagnosed some 66 hours after delivery. The division between acute and subacute cases has been used previously (Ocejo, 1947).

CASE REPORT

A primigravida aged 19 had a normal delivery of a living female child weighing 7 lb. 12 oz. (3.5 kg.) at 8 p.m. on October 22, 1949. The third stage was prolonged and a post-partum haemorrhage occurred. The patient's doctor was called by the midwife, and the placenta was expressed by Credé's method. The patient became very collapsed after this manœuvre and, at the request of the doctor, blood was taken to the house and a transfusion of 2 pints (1.14 litres) was given. The patient's general condition improved. The loss was normal and the blood pressure was also within normal limits. Approximately an hour later the loss became excessive and the patient's condition again deteriorated. She was admitted to hospital.

On admission the pulse rate was 110 a minute and the blood pressure 90/50. Loss was not excessive. She was given "omnupon," ½ gr. (22 mg.), and ergometrine, 0.5 mg. A further 2 pints (1.14 litres) of blood was given. She responded satisfactorily to this treatment. The following morning her general condition was fairly satisfactory. Lochia were noted as being rather heavier than normal.

On October 24 her temperature was 100° F. (37.8° C.) and pulse 106. A course of penicillin, 50,000 units intramuscularly three-hourly, and sulphadimidine, 2 g. and 1 g. four-hourly, was begun.

I first saw the patient on October 25. Her temperature was 101° F. (38.3° C.) and pulse 110. She appeared pale and ill. Lochia were excessive. Slight lower abdominal tenderness was present. A mass could be felt which was regarded as the fundus of the uterus. Arrangements were made for examination under anaesthesia. At that time it was thought that there were probably some retained products. Haemoglobin was 56% (Haldane). A further transfusion was begun, and after premedication with omnopon, $\frac{1}{2}$ gr. (22 mg.), and scopolamine, 1/150 gr. (0.43 mg.), the patient was anaesthetized with thiopentone and cyclopropane. Examination showed a completely inverted uterus. The cervix could be felt through the vaginal fornices. It was tightly constricted. An attempt was made to replace the uterus manually without success. Continuous recording of the blood pressure and pulse rate by the anaesthetist during this attempt showed little or no deterioration of the patient's general condition. The patient was returned to bed. The foot of the bed was raised and the transfusion continued until a further 2 pints (1.14 litres) of blood had run in. Hot saline douches were given in an attempt to reduce the loss. This was effective.

On October 28 her general condition was much improved. Her temperature was now normal, and she was breast-feeding satisfactorily. On November 11 the haemoglobin was 75%. Vaginal examination revealed a uterus involuting well but still completely inverted.

The Aveling repositor arrived on November 20 and was fitted. The patient complained of only a little discomfort. A small dose of pethidine was necessary on the first night. The tapes needed frequent adjustment to maintain satisfactory tension and to prevent the stem of the repositor pressing on the perineal edge or anteriorly beneath the urethra. I had no idea how long the repositor might take to effect replacement, but it was decided to examine the patient again in six days' time. It was then found (November 26) that the uterus was in normal position and the head of the repositor was firmly held inside the uterine cavity and the cervix closely applied to the stem of the instrument. It was obvious, then, that more frequent examinations should have been made. This point is stressed by Spencer (1920). The patient was returned to bed with a 1-lb. (450-g.) weight attached to the repositor. Next day the traction weight was increased to 2 lb. (900 g.), but the original weight was soon substituted, as the heavier one gave rise to considerable lower abdominal discomfort. On the morning of November 28 the repositor head was in the vagina, and was removed. Bimanual examination and with a uterine sound showed a normal uterus. Lochia were slight and white only.

The patient was allowed up the next day. The haemoglobin was now 80%. The infant was fully breast-fed and weighed 8 lb. 8 oz. (3.9 kg.). The patient was discharged home on December 3.

She was seen in the post-natal clinic on December 13, when the findings were completely normal.

COMMENT

In acute cases of inversion of the uterus seen within minutes to several hours after the occurrence of the inversion, digital replacement can usually be done, but, if not, the assistance of hydraulic pressure may succeed (O'Sullivan, 1945).

If these methods fail or the case is not diagnosed in the early stages the problems are markedly increased. Some of these patients will not improve until replacement has been effected, and even if the patient is successfully brought through this stage of shock the local changes in the birth canal add to the difficulties of reposition. Oedema of the uterus occurs and a constriction ring is prone to form (Berkeley, Bonney, and MacLeod, 1938). In these later cases the following lines of treatment must be considered.

1. Manual reposition should be attempted first. Naturally there is a greater chance of success with this method if the inversion is incomplete, thereby allowing counter-traction

on the cervix. This is well brought out in the three cases described by Henderson and Alles (1948). Burwig (1944) thinks that the type of anaesthetic has an important bearing on the success or otherwise of delayed manual reposition. He favours a spinal anaesthetic together with cyclopropane.

2. If manual reposition fails operative intervention is advocated by some authors. Munro Kerr and Chassar Moir (1949) review the literature and, although quoting successes with more conservative methods, suggest that surgical treatment should be given an extended trial in this country. The most impressive work published on the surgical treatment of inversion is that of Huntingdon, Irving, and Kellogg (1928) and Irving and Kellogg (1931). They advocate early abdominal operation for the replacement of the uterus. A case successfully treated on these lines has been recently reported in this country by Bigby, Greeves, and Kinch (1948).

3. The principal alternative to operative treatment is the use of a repositor described by Aveling (1886). There have been many reports of its successful use. Spencer (1920) had successes, and describes many of the practical points in its use. McCullagh (1925) gave an account of 29 cases treated with the repositor with no deaths. It should be remembered that many of these cases were treated before antibiotics and sulphonamides were available.

4. Lastly, there is a definite group of cases in which spontaneous reposition occurs. Vartan (1944) brings out this point and quotes eight cases in which this occurred. Berkeley (1915) even suggested that the uterus be left alone deliberately with this in view.

I would like to record my thanks to Dr. Douglas Wilson for his administration of the anaesthetic and the recordings at that time, and to the nursing staff of the Maternity Hospital, Luton, for their excellent co-operation in the management of the case.

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A short article in *Nature*, July 19 (p. 110), describes the curious behaviour of the bower birds, relations from Australia and New Guinea of the birds of paradise, but lacking the resplendent plumage of these well-known birds. The astounding fact is that during the breeding season the male birds build tiny ceremonial houses, which they decorate in various ways. Some even paint their houses inside—they mix charcoal or fruit pulp with a secretion from their mouths and apply this paint, with a wad of fibre from some soft bark as a brush. These houses are not nests, but sexual amusement parlours. The male chooses his territory, carefully clears it of all forest litter, and in some species makes his bower by arranging rows of parallel sticks in the ground, the long axis of the "building" being north and south, with a clear display area at the north entrance. Coloured leaves, flowers, berries, coloured bits of broken glass, and tram tickets are laid out carefully every morning on the display area, and put away again at the end of the day, or tidied up first thing next morning. There is a system in the arrangement, and the objects are usually blue, or, if not, lemon-yellow or greyish-brown. Once put out, the objects appear to be sexually interesting, since the male bird will disregard the female but move about the bower displaying to one of the objects by erecting his feathers and making characteristic movements. The selective value of this avian fetishism is discussed.