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Outside Europe

Diagnostic Clue to Acute Splenic Torsion in the Tropics

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Summary

In three patients with acute torsion of the spleen in the tropics the presenting symptoms included an abdominal mass, pain, and vomiting. In malarious areas adults usually know that they have splenomegaly and hence this fact should be ascertained in the clinical history. In an acute abdominal catastrophe, with a palpable tumour and a history of known splenomegaly, the absence of the spleen in the normal position suggests acute splenic torsion.

Introduction

According to Maingot¹ torsion of the spleen is rare; though Bowesman² says that it is seen more frequently in the tropical areas of the world, and Davey³ points out that the diagnosis is seldom made correctly unless the tumour is situated in the upper left quadrant of the abdomen. An acute torsion presents as an abdominal catastrophe, usually requiring urgent laparotomy. Where malaria is rife, the presence of an enlarged spleen is common, and most adults with this abnormality are aware of the fact.

This paper describes three cases of acute torsion of the spleen. In two of these—patients with known splenomegaly—the absence of the spleen in its normal position was the key to diagnosis.

Case 1

A Melanesian woman aged about 30, was admitted to the Central Hospital, Honiara, British Solomon Islands, on 9 September 1969 with a four-year-old abdominal mass. She had three children, and shortly after the birth of the last child, aged 4, had noticed an abdominal swelling which had gradually increased in size. She was adamant that a spell had been cast on her and that the mass was a turtle which was growing in size and swimming around her abdominal cavity. She had had numerous attacks of malaria, was thin, and looked older than her years.

On examination the patient had a normal temperature, a pulse rate of 88, and the abdomen was soft and contained a large, hard, mobile swelling 35 cm × 15 cm. The mass could be moved into any quadrant of the abdomen easily and without pain. It could be felt both rectally and vaginally. There was no other abnormality.

Investigations showed haemoglobin level of 9.4 g/100 ml, white blood count 7,900 mm³. A blood film was negative for malaria but contained microfilarial parasites, and an ovarian cyst was diagnosed. The patient was treated with diethylcarbamazine for her filariasis and arrangements made to carry out laparotomy in due course.

On 11 September she suddenly developed constant severe, generalized abdominal pain. This was followed by copious vomiting of digested food and bile-stained fluid. Her pulse rate rose to 102 and she had a temperature of 37.4°C. There was marked guarding all over the abdomen with maximum tenderness and rebound over the mass which was now fixed in the right iliac fossa. Bowel sounds were normal. On rectal examination the tender mass was palpable. The diagnosis was now torsion of a large ovarian cyst.

An emergency laparotomy was carried out and the abdomen explored through a right lower paramedian incision. The peritoneal cavity contained a small amount of colourless free fluid and a large, congested spleen was found lying in the right iliac fossa. The splenic pedicle was long and had undergone four to five complete anticlockwise turns. The vessels in the pedicle were not thrombosed. The spleen was easily mobilized and splenectomy carried out. The abdomen was closed without drainage. The spleen weighed 2,540 g. A routine suppressive course of chloroquine was given. After the operation the patient ran an intermittent mild pyrexia of unknown origin which settled on penicillin. She was discharged 12 days after the operation, and, when last seen in February 1974, was very well despite several attacks of fever.

Case 2

A 30-year-old Melanesian plantation labourer, was admitted to hospital on 1 October 1973. He had developed a severe abdominal pain three days previously which had become progressively worse. Copious vomiting had occurred on at least three occasions. Nothing had been taken orally and his bowels had not opened. He had had many attacks of fever and admitted that he had a palpable spleen in the left hypochondrium.

He looked ill and was dehydrated. He had a temperature of 37.6°C, and a pulse rate of 106. The chest was clear; the abdomen was rigid and to the right of the umbilicus there was an abdominal mass 10 cm × 15 cm which was firm, tender, and fixed on palpation. There was definite rebound tenderness all over the abdomen and bowel sounds were absent. A spleen was not palpable in the left hypochondrium. On rectal examination the tender mass could be felt in the right iliac fossa. A routine blood film revealed no malaria parasites. The haemoglobin level was 11.2 g/100 ml, and

the white blood count $12,600 \text{ mm}^3$. A provisional diagnosis of torsion of the spleen with strangulation was made. The patient was rehydrated with intravenous fluids and laparotomy carried out through a right paramedian incision. Blood-stained free fluid was noted. The mass was found to be an enlarged, congested spleen, surrounded by omentum. The splenic pedicle had undergone about six anticlockwise turns and a portion of pancreatic tail was present in the base of the splenic pedicle (fig. 1). The vessels were thrombosed. The torsion was unwound, the vessels ligated individually, the pancreatic tail oversewn, and the spleen removed. It weighed 1,473 g and several areas of infarction were noted. A course of suppressive antimalarial drugs was given and recovery was uneventful. The patient was discharged on 10 October 1973.

FIG. 1—The spleen showing torsion at operation. The marked congestion in the splenic pedicle is clearly seen. Case 2.

Case 3

A 30-year-old Melanesian housewife with seven children, was admitted to hospital on 23 January 1974. She had developed a severe, generalized abdominal pain two days previously accompanied by vomiting. The pain was constant and had gradually increased in severity, becoming most marked in the right hypochondrium. The patient said that she felt a mass under her right ribs which she had not felt before. Nevertheless, she had been aware for some years of a palpable spleen in the left hypochondrium. She admitted to no recent attacks of fever. When she was examined she was in obvious pain, with a temperature of 37.1°C and a pulse rate of 108. The abdomen was moderately distended and a large, hard, tender swelling was felt in the right hypochondrium where there was maximum guarding and rebound. The spleen was not palpable in its normal position. The bowel sounds were normal and a uterus the size of a 20-week pregnancy was felt. The blood contained no malarial parasites. The haemoglobin level was 10.7 g/100 ml and the white blood count $8,800 \text{ mm}^3$. A diagnosis of torsion of the spleen was made and laparotomy was carried out through a right upper paramedian incision. Clear fluid was noted and an enlarged spleen covered in greater omentum was found under the right lobe of the liver. The spleen had a long pedicle which had undergone approximately six twists in an anticlockwise direction (fig. 2). Thrombosis was noted in the splenic vessels. Splenectomy was carried out and the abdomen closed without drainage. The spleen weighed 1,050 g (fig. 3). Postoperative recovery was uneventful; a course of suppressive antimalarial drugs was given and the patient was discharged from hospital on 4 February. She was advised to continue malaria prophylaxis until after the birth of the child.

Comment

The most comprehensive comment on torsion of the spleen is by Abell.⁴ In only 34 of his 97 cases were the torsions acute, and in all of these there was a history of the sudden onset of abdominal pain and copious vomiting. A mass is

FIG. 2—The spleen at operation before removal. The torsion of the pedicle is seen. Case 3.

FIG. 3—The congested spleen after removal. The torsion is well seen. Case 3.

usually palpable and in only three of Abell's cases was a mass not felt. In only seven of the 97 cases were the spleens present in the left upper quadrant and presumably for this reason the correct diagnosis is so seldom made. In 29 of his cases there was a history of malaria, with 18 patients knowing that they had splenomegaly. All the spleens were enlarged and grossly so in most cases. Abell⁴ and Bohrer⁵ show that most cases were in women.

Anand and Davey describe four cases of torsion of the spleen, in only one of which could the torsion be described as acute.⁶ They also described a further case from Africa which was acute, and presented as a peritonitis.⁷

The differential diagnosis of this abdominal catastrophe is usually either acute peritonitis, acute intestinal obstruction, or, in women, commonly torsion of the pedicle of an ovarian cyst. In the three cases in this paper the main presenting symptoms were the sudden onset of severe abdominal pain and copious vomiting. In the first case the patient

FIG. 4—The patient 10 days after the operation. Note the right upper paramedian incision which was made over the palpable spleen. Case 3.

was actually in hospital at the time of the acute torsion. The onset of symptoms was dramatic and similar to those of an acute perforation of a peptic ulcer. The patients were all in obvious pain and looked ill. Their pulse rates were raised and there was a mild fever. In all cases the abdominal signs were those of peritonitis with the guarding and rebound maximum over the large, hard, fixed tumour. None of the three tumours had the typical shape and consistency of a spleen. McClain and Lebherz suggest the position of the splenic notch is of diagnostic significance, but in none of the cases described here was a splenic notch palpable.⁸

Bohrer⁵ quotes a case of Mauro,⁹ in which a young man with known malarial splenomegaly presented with an acute

abdomen. Nevertheless, on clinical examination the splenic area was empty, and hence the correct diagnosis of torsion of the spleen was made. Romiti¹⁰ describes a young girl with an acute abdomen who was known to have a palpable spleen from malaria. On examination the spleen was not felt, and here again the correct diagnosis was made. Darle *et al.*¹¹ describe a case from Sweden, very similar to my third case in this paper.

In the first case preoperative diagnosis was incorrect. Nevertheless, since then, in all cases with symptoms of an acute abdomen where a mass has been felt, the patient has been specifically asked about the presence of an enlarged spleen or of a mass in the left upper quadrant of the abdomen. In the second case, on direct questioning, the patient admitted he had been conscious of an enlarged spleen which on clinical examination could not be palpated in the usual position. In the third case the patient volunteered the information that the mass she had had in her left hypochondrium had disappeared before being asked.

Hence in a malarious area it would seem reasonable to suggest that in all acute abdomens where a tumour is palpable the patient should be asked if he had been aware of an enlarged spleen or had noticed a mass in the left hypochondrium. If an enlarged spleen is absent from the left hypochondrium and a tender tumour is felt elsewhere, then the diagnosis is probably acute torsion of the spleen.

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Aspects of Plastic Surgery

Cosmetic Surgery

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Introduction

The serious medical practitioner can no longer doubt the justification for cosmetic surgery. For centuries people have scarified, tattooed, burned, circumcized and otherwise changed

the human body to conform to certain standards of beauty which were currently in vogue. Beauty is not easily defined for the perimeters of beauty change from year to year and from civilization to civilization, and more money is spent on non-essential beauty aids than on all of the medical programmes in existence. Hence apparently the factors separating surgery for beauty from other beauty aids highly prized by our society are safety and comfort. With modern anaesthesia and postoperative control of discomfort, cosmetic surgery is no longer dreaded. New and better surgical techniques provide new and better results. The demand for cosmetic surgery is increasing throughout the world. The competent doctor, no matter what his field, should be aware of what can be offered by cosmetic surgery.

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