

Case Report

Spontaneous rupture of the liver in systemic lupus erythematosus

IAN HASLOCK

From the Rheumatology Unit, Middlesbrough General Hospital, Middlesbrough, Teeside

The commonest cause of rupture of the liver in this country is severe blunt trauma to the abdomen, particularly in road traffic accidents. Though rupture either spontaneously or after minimal trauma may occur in malarious areas, such an occurrence is rare in Britain. A case is reported in which rupture of the liver occurred as an apparently spontaneous event.

Case report

A 32-year-old woman, an ex-nurse, was being treated for systemic lupus erythematosus (SLE) of 14 years' duration. She required 7.5 mg prednisolone daily to control her symptoms, though she had required both cervical and lumbar sympathectomies in the past to control her Raynaud's phenomenon and early digital gangrene. Her marked personality disorder had always rendered management difficult. Her only brother had died from SLE aged 20.

For 3 weeks before her final admission she had been bedbound with generalized malaise and increased arthralgia. The evening before admission she suddenly developed severe pain in her right lower chest radiating to her right subcostal region and loin. This was unrelieved by parenteral dihydrocodeine given by her general practitioner, but was partially relieved by lying on her right side. On the morning of admission she had vomited profusely. On admission she was sweating and restless. Her blood pressure was 110/70 mmHg in contrast to her usual level of 220/120 mmHg, her peripheral circulation was poor, and her temperature was 33.3°C. Air entry was reduced at the right base. Her abdomen was generally tender with fullness in the right flank, and a large, acutely painful mass palpable on the right side to below the level of the umbilicus. The tenderness extended to, and was maximal in, the right loin. She was prepared for surgery with rapid rehydration and intravenous hydrocortisone which improved her condition and raised her blood pressure.

Laparotomy was performed through a right paramedian incision, large quantities of free blood being found in the peritoneum. The liver was the site of a large haematoma confined to the right lobe. The incision was converted into a thoracoabdominal one, and an anatomical right lobe hepatectomy was performed, the right lobe of the liver being removed with the gallbladder, cystic duct, right hepatic duct, vein, and artery. After restoration of blood volume and careful fluid and electrolyte balance,

the patient improved through a period of intensive care. She subsequently deteriorated, became increasingly icteric, and developed a staphylococcal septicaemia. She suffered a cardiac arrest on her 14th postoperative day and died 24 hours later.

The resected lobe of liver measured 23 × 15 × 9 cm, and had a subcapsular haematoma measuring 22 × 13 × 0.5 cm. The whole specimen weighed 1,350 g (Fig. 1).

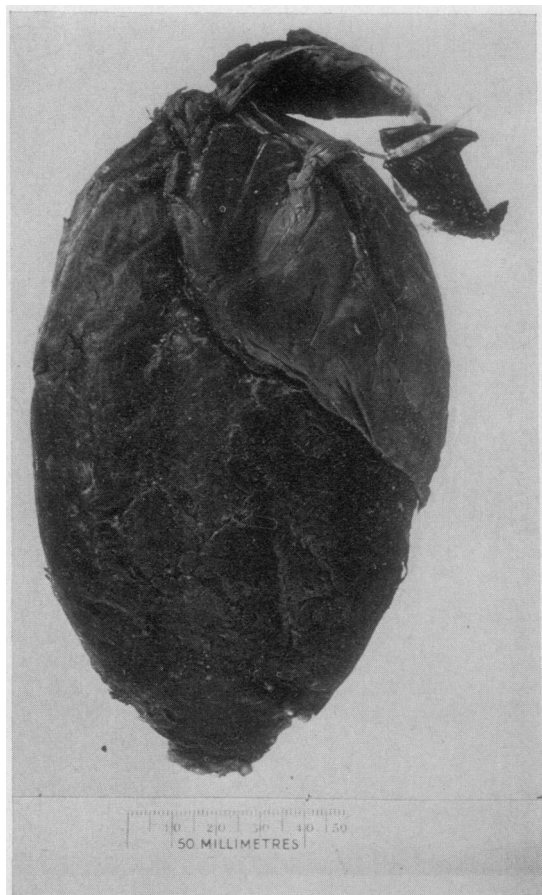


FIG. 1 *The specimen of liver from operation. The resected right lobe is seen above with the haematoma protruding downwards from it*

Microscopically there were yellowish patches of coagulative necrosis, and arteries in the portal tracts showed fibrinoid necrosis involving their whole circumference. The site of the rupture was found in one of these vessels (Fig. 2). There was lymphoid infiltration of other parts of the portal tracts and dense polymorph infiltration was seen in areas of necrosis. Additional findings at autopsy included Libman-Sacks vegetations of the aortic and mitral valves and a hepatic remnant weighing 1,620 g. This was the site of fatty change and further necrotic areas.

Discussion

Hepatomegaly is found clinically in up to one third of patients with SLE (Table). The pathological changes have been the subject of controversy, in particular concerning the relationship of SLE to 'lupoid' hepatitis. Arteritis in the liver has, however, been previously described, and the histological picture in this case is similar to that illustrated by Dubois (1966). It appears that in our patient the arteritis produced areas of infarction within the liver, rupture having occurred of one of the infarcted areas.

Table *Hepatomegaly in systemic lupus erythematosus*¹

<i>Author</i>	<i>Year</i>	<i>No. of patients</i>	<i>Incidence (%)</i>
Harvey and Cockrane	1954	138	32
Larson	1961	200	27
Dubois and Tuffanelli	1964	520	23.2
Haserick	1966	275	31

Careful examination of the patient failed to reveal any evidence of injury, and detailed questioning of both the patient and her relatives before and after operation elicited no history of even the mildest trauma to account for the hepatic rupture. While the possibility of unrecognized trauma, for example during an episode of vomiting, remains, the rupture was clinically spontaneous and provides a hitherto unreported addition to the protean manifestations of SLE.

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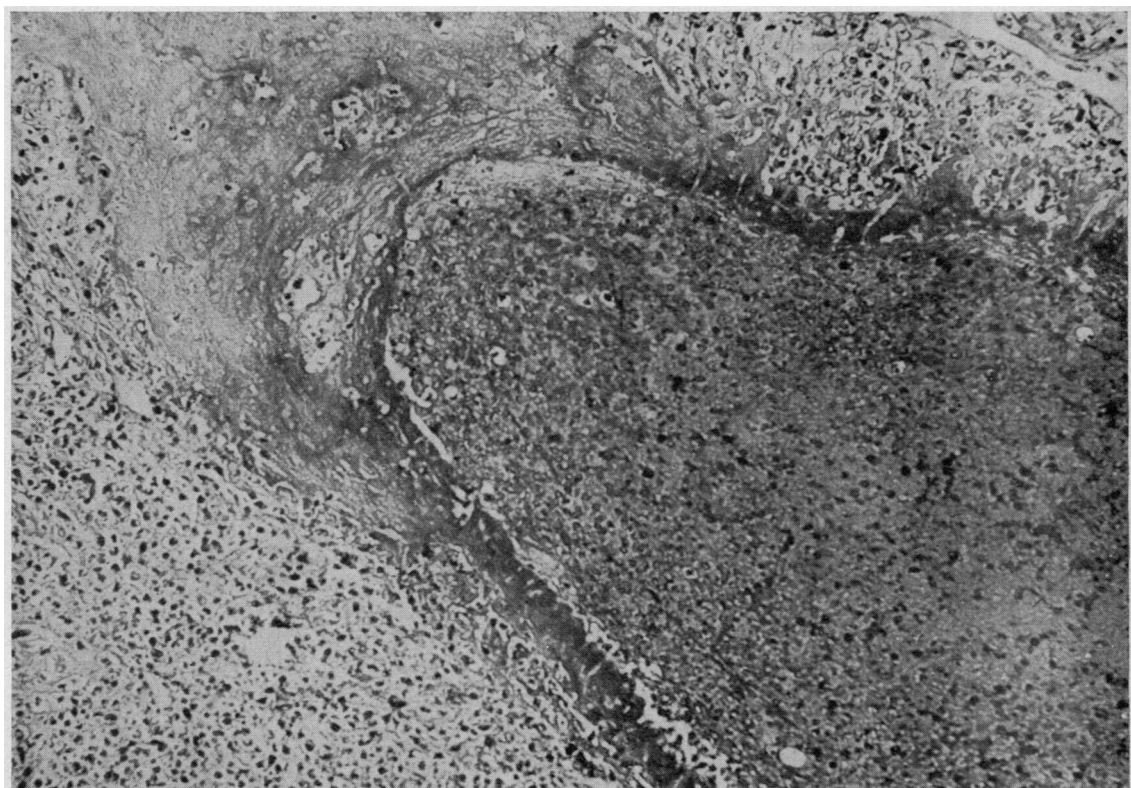


FIG. 2 *The site of origin of the haematoma in a ruptured arteriole*

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