Diagnosis of haemobilia by duodenoscopy

JAMES ROSE
M.A., M.B., M.R.C.P.

STUART HISHON
M.B., M.R.C.P.

RICHARD MACHELL
M.A., M.B., M.R.C.P.

*The Department of Medical Gastroenterology,
Addenbrooke's Hospital, Cambridge*

Summary

A case of haemobilia due to liver abscess presenting as haematemesis and melaena is described. Duodenoscopy in the acute phase can distinguish haemobilia from other causes of upper gastrointestinal bleeding and is the first step towards accurate localization of the lesion by hepatic arteriography.

Introduction

Haemobilia is an uncommon condition which may pose considerable diagnostic difficulties. It is associated with an appreciable mortality and not infrequently the diagnosis is established only at post-mortem (Karam and Jacobs, 1961; Sandblom, 1972). Significant gastrointestinal bleeding occurs in 90% of cases of haemobilia (Sandblom and Mirkovitch, 1977) but routine barium studies (Herman and Hoerr, 1967) and gastroscopy usually prove unhelpful. In the acute stage, the value of inspecting the ampulla of Vater at duodenoscopy in establishing the diagnosis has not been sufficiently stressed.

A case is now described of haemobilia caused by liver abscess in which the diagnosis was established by duodenoscopy after acute upper gastrointestinal bleeding.

Case history

A 62-year-old woman with rheumatoid arthritis treated with prednisolone, penicillamine and naproxen presented with several episodes of right upper quadrant pain, associated with fever, shivering, jaundice on one occasion and an iron deficiency anaemia. Gall stones were demonstrated by cholecystography. A barium meal and endoscopy revealed benign antral ulceration which was treated with cimetidine.

At cholecystectomy 6 months later the gall bladder was inflamed and contained stones. The biliary tree and stomach appeared normal, but there were multiple white nodules in the liver.

A wedge biopsy showed the appearances of chronic liver abscess. There was no histological evidence of malignancy.

Following surgery, treatment with cimetidine was discontinued. Four weeks after operation the patient developed colicky pain in the right hypochondrium associated with nausea and a haematemesis. Endoscopy showed blood and bile in the stomach and a small antral erosion, but the duodenal cap appeared normal. A barium meal was also normal. Eleven days later she had a similar attack of pain with a haematemesis, followed by fever and obstructive jaundice. Serum amylase rose to 2280 i.u./l. Endoscopy of the stomach and duodenal cap on this occasion was normal. She was transfused, treated with antibiotics and a provisional diagnosis of haemobilia was made. During a subsequent attack blood was seen in the duodenal loop at duodenoscopy and a week later a further duodenoscopy performed during another bleed demonstrated blood spurting into the duodenal loop through the ampulla of Vater, confirming the diagnosis. Coeliac axis angiography showed a large pool of contrast leaking from the left hepatic artery into the duodenum via the biliary tree.

Attempts to embolize the lesion proved unsuccessful and a left hemi-hepatectomy was subsequently performed. At operation a firm cystic swelling was found in the left lobe with blood in the bile ducts. The resected liver contained multiple yellow abscesses and scars. No organisms were grown or seen in histological sections. The patient has made a good recovery with no further episodes of pain or bleeding.

Discussion

Because of the previous gastric ulcer and the presence of an erosion at one endoscopy, an erroneous diagnosis of haemorrhage from gastric ulceration was at first made. The clinical features were, however, typical of haemobilia (Sandblom, 1972). A raised serum amylase after haemobilia has been described (Redman and Joseph, 1975) and is

a useful diagnostic pointer (Taylor and Dawson, 1978).

Hepatic abscesses cause haemobilia (Sandblom, 1972), and probably developed in the patient after cholangitis. Steroids may have been a predisposing factor (Karam and Jacobs, 1961). Angiography and surgery confirmed that a branch of the left hepatic artery had been eroded by an abscess and had bled intermittently into the biliary tree, producing biliary pain and gastro-intestinal haemorrhage. Jaundice and pancreatitis followed as a result of duct obstruction.

Investigative procedures are becoming an important cause of haemobilia. Percutaneous liver biopsy (Ball *et al.*, 1975; Seltzer *et al.*, 1976; Lee, Tasman-Jones and Wattie, 1977), transhepatic cholangiography both with the rigid needle (Redman and Joseph, 1975; Cahow, Burrell and Greco, 1977) and with the Chiba needle (Delamarre *et al.*, 1978), have all produced haemobilia. The continuing use of these valuable diagnostic procedures may be expected to produce further cases of haemobilia. Its correct diagnosis and management is, therefore, of considerable importance.

As significant gastrointestinal blood loss occurs in the majority of cases of haemobilia (Sandblom and Mirkovitch, 1977), urgent upper alimentary pan-endoscopy with inspection of the ampulla of Vater with a side-viewing instrument will help to distinguish haemobilia from other causes of bleeding. The diagnosis can be made when blood is seen to issue from the ampulla. Fresh blood in the second part of the duodenum, in the absence of a mucosal lesion to account for it, is also highly suggestive.

The use of duodenoscopy to establish the diagnosis of haemobilia is infrequently reported. In the majority of cases in which it has been used, the correct diagnosis has been made by this method (Lee *et al.*, 1977; Eggink, Perlberger and Van Erk, 1977; Schildberg, Witte and Heberer, 1976; Lee *et al.*, 1977; Ball *et al.*, 1975). The diagnosis can be made by gastroscopy alone (Taylor and Dawson, 1978).

This case illustrates that duodenoscopy and inspection of the ampulla of Vater in the acute stage should be considered in all patients in whom

endoscopy of the proximal upper gastro-intestinal tract has failed to demonstrate a site of bleeding. Once the biliary tree has been established as the source of bleeding, the site of the lesion is best defined by hepatic arteriography (Sandblom and Mirkovitch, 1977).

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