Visualisation of the peritoneum during endoscopic retrograde cholangiopancreatography

To the Editor—We read with great interest Cheung et al's[1] article discussing the management of retroperitoneal perforation after endoscopic retrograde cholangiopancreatography (ERCP) procedures. We would like to report an uncommon site of perforation during ERCP examination and emphasise the importance of differentiation of intraperitoneal and retroperitoneal perforations during ERCP procedures.

An 88-year-old woman was admitted to hospital with severe epigastric pain and 'coffee grounds' vomiting. Serum amylase and alanine aminotransferase levels were 1700 U/L (normal range, 25-85 U/L) and 99 U/L (normal range, 10-40 U/L), respectively. Computed tomography scan of the abdomen showed a swollen pancreas with a dilated common bile duct and stones in the gall bladder. The patient deteriorated rapidly and was admitted to the Intensive Care Unit 24 hours later. An urgent ERCP was arranged for her biliary pancreatitis. During ERCP, shortly after the endoscope (TJF140R, Olympus, Tokyo, Japan) was passed across the oesophago-gastric junction, the endoscopist visualised peritoneal content and a loop of small bowel. The procedure was immediately abandoned and the patient was sent for laparotomy. On laparotomy, 2 L of turbid fluid was found. However, there was no apparent perforation site identified despite extensive search. Finally, the same endoscopist performed an on-table endoscopic examination of the stomach using a forward-viewing endoscope (GIF-XQ140, Olympus, Tokyo, Japan) and found a 1.5 cm high lesser curve ulcer with a central (2 mm) perforation (Fig). The perforated site of the ulcer was partially sealed with omentum and was apparent only with air insufflation. The ulcer was repaired. Exploration of the common bile duct followed and a T-tube was inserted for drainage of the biliary system. Despite aggressive supportive treatment, the patient died 3 days after surgery due to multiple organ failure.

Unlike duodenal retroperitoneal perforation, which is usually related to therapeutic manoeuvres, such as sphincterotomy, intraperitoneal perforation during ERCP can occur when the endoscope is manipulated through distorted anatomy (eg after Billroth II gastrectomy[2]) or stenotic areas (eg scarred duodenum[3]). In this case, there was no forceful movement when advancing the endoscope into the stomach during

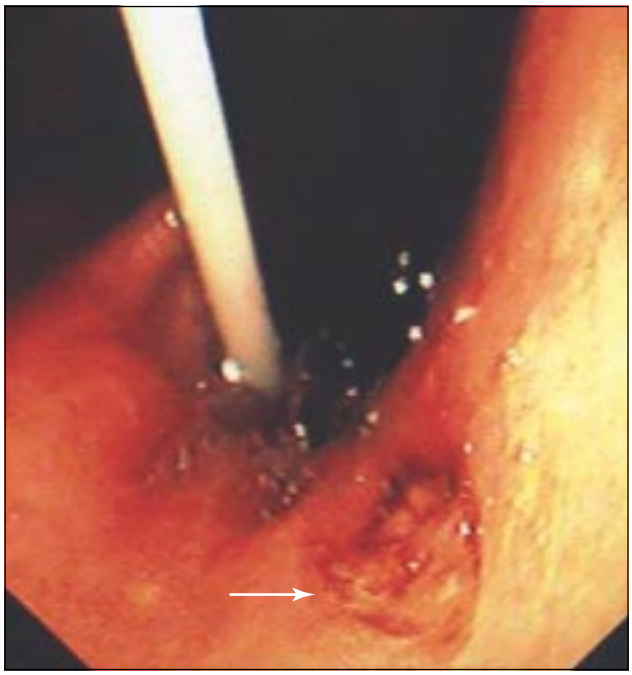

Fig. A high lesser curve perforation (arrow) can be seen. The endoscope is in retroflexed position

ERCP. Visualisation of the peritoneal content in this case may have resulted from the opening of a sealed-off perforation by air insufflation during ERCP. A side-viewing endoscope provided a good en-face view of the high lesser curve ulcer and even a minute perforation might be readily identified using this approach. There was also a possibility that the perforation was caused by the bridge elevator of the endoscope, but the endoscopist could not recall any change of position of the bridge elevator during the examination.

The differentiation of intraperitoenal and retroperitoneal perforation during ERCP is important in making the diagnosis and in subsequent management. Intraperitoneal perforation can be readily identified, as the endoscopist may visualise peritoneal contents such as the small bowel, and in some cases patients develop tension pneumoperitonium causing excruciating pain. In retroperitoneal perforation, the endoscopist may visualise retroperitoneal fat and air around the retroperitoneal space. Plain X-rays (with air as contrast) are usually informative in both situations. Intraperitoneal perforation always requires surgical intervention, while some selected cases of retroperitoneal perforation can be successfully treated

conservatively.[4] Nevertheless, we would recommend an early surgical consult and careful monitoring after retroperitoneal perforation, even in patients who have had an apparently benign early clinical course.

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Non-melanoma skin cancer in Hong Kong

Authors' reply

To the Editor—We are pleased to respond to the letter written by Burd and Cheung.[1] As there is not a skin cancer registry in Hong Kong to pool the clinical data of non-melanoma skin cancers from different sectors, we all face the same problems with respect to data analysis. The Social Hygiene Service is a major public dermatological unit serving the whole territory of Hong Kong. The data used in our analysis was extracted from all clinics under the Service and hence was representative of patients seeing public dermatologists. The major drawback, as mentioned in the first paragraph of the *Discussion*, was that we could not include data from other specialties or the private sector. Therefore, the incidence of non-melanoma skin cancer reported by us is likely to be lower than the actual incidence in the territory. A skin cancer registry or prospective population-based epidemiological study may solve this problem. We hope that our paper has stimulated the interest of other parties for further research on this issue.

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