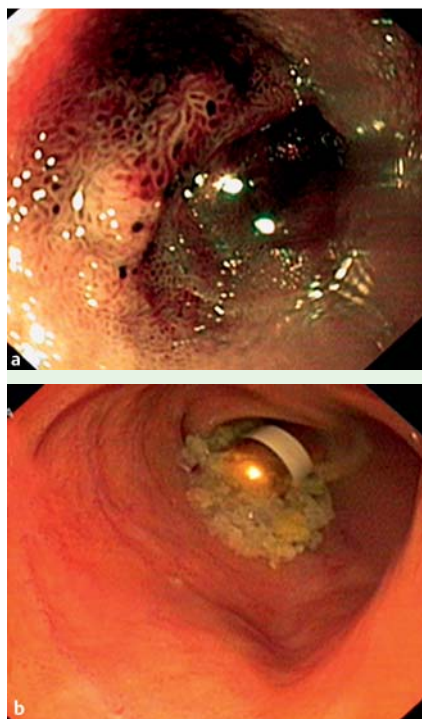


## Clinical acute pancreatitis following anterograde single balloon enteroscopy



**Fig. 1** **a** Single balloon enteroscopy (SBE) narrow band image showing ulcers in the small bowel. **b** SBE showing the retained capsule in the distal ileum.

A 37-year-old woman with suspicion of Crohn's disease underwent capsule endoscopy; however, the capsule was still in the small bowel even after 14 days. Anterograde single balloon enteroscopy (SBE) was planned to retrieve the capsule and to simultaneously carry out a biopsy. On SBE, multiple ulcers and one major stricture were found in the distal bowel with the capsule lying over the stricture (► Fig. 1 a, b). The capsule was successfully retrieved and multiple biopsy samples were taken, with the procedure lasting 3 hours. Following the procedure, the patient developed severe upper abdominal pain. Investigations revealed serum amylase of 1217 U/L at 24 h post procedure. Although previous computed tomography (CT) scans had shown a normal pancreas (► Fig. 2), a further CT scan of the abdomen showed a bulky pancreas with peripancreatic fluid collections (► Fig. 3). The patient was managed conservatively and discharged on day 7. The small bowel biopsy showed features consistent with Crohn's disease.



**Fig. 2** Contrast-enhanced computed tomography (CT) scan taken 1 month before the single balloon enteroscopy showing a normal pancreas.



**Fig. 3** Contrast-enhanced computed tomography (CT) scan taken at the time of pancreatitis showing a bulky body and tail of pancreas with ill-defined fluid collections in the peripancreatic region.

SBE is a safe endoscopic technique for the evaluation of the small bowel. Asymptomatic post-procedural hyperamylasemia is common after SBE, with one reported case of acute pancreatitis after retrograde SBE [1,2]. The present case is the first report of acute pancreatitis after anterograde SBE. Various theories have been postulated for hyperamylasemia after double/single balloon enteroscopy, such as repeated stretching of the small-bowel and/or mesenteric ligaments, prolonged mechanical stress on the pancreas due to repeated stretching by the endoscope, mechanical torsion of the pancreatic body during insertion of the endoscope, ischemia of the pancreas, direct trauma to the ampullary area, or a direct obstruction of the pancreatic duct by the insuf-

flated balloon, but none has been universally accepted [3,4].

Most studies on double/single balloon enteroscopy could not identify any risk factor for the associated abdominal pain, elevated pancreatic amylases, and acute pancreatitis [5]. Thus we advise close observation after a prolonged SBE procedure and that any patient with postprocedural abdominal pain should be evaluated for acute pancreatitis.

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**Competing interests:** None

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