Endoscopic management of small bowel obstruction caused by intragastric balloon using antegrade single-balloon enteroscopy

A 44-year old woman with type 2 diabetes mellitus who underwent intragastric balloon (Spatz3) insertion 1 year ago presented with acute abdominal pain for 3 days. Abdominal examination showed mild tenderness at the epigastrium. Laboratory investigation showed a white blood cell count of 12,630/mm³. An abdominal computed tomography (CT) scan revealed a distally migrated intragastric balloon in the mid-jejunum causing a small bowel obstruction (▶Fig. 1).

After a discussion regarding treatment options, she decided to undergo endoscopic removal using antegrade single-balloon-assisted enteroscopy.

On endoscopy, an intragastric balloon filled with methylene blue completely occupied the jejunal lumen (▶Fig. 2). Duodenal and proximal jejunal mucosa, especially the surrounding area, was markedly inflamed and covered with exudates (▶Fig. 3, ▶Fig. 4). The balloon was punctured with a 25G needle, aspirated until completely collapsed, and then retrieved using a polypectomy snare (▶Video 1, ▶Fig. 5). A broad-spectrum intravenous antibiotic was given post-procedure. She was able to advance her diet and was safely discharged after hospitalization for 3 days.

Intragastric balloon insertion is a minimally invasive and effective procedure with favorable safety profiles. Migration of an intragastric balloon occurred in approximately one percent of cases whereas 0.3 percent had an intestinal obstruction [1]. The risk of spontaneous balloon deflation and possible subsequent migration increases over time, especially after 6 months [2]. An intragastric balloon causing obstruction in the proximal duodenum is likely to be successfully removed endoscopically, whereas more distal migrations have been successfully treated laparoscopically, with few reports of percutaneous aspiration [2, 3]. At present, only two cases of successful endoscopic treatment of a migrated intragastric balloon using double-balloon-assisted enteroscopy have been reported [4, 5]. We reported the first experience using antegrade single-balloon enteroscopy to remove a migrated intragastric balloon. Meticulous care should be taken while gently with-
The authors

Manus Rugivarodom¹, Theera Pongprasopchai², Chompol Yamcharoen³, Kotchakon Maijang⁴, Varayu Prachayakul¹
¹ Siriraj GI Endoscopy Center, Division of Gastroenterology, Department of Internal Medicine, Faculty of Medicine, Siriraj hospital, Mahidol University, Bangkok, Thailand
² Surgery Unit, Thonburi Hospital, Bangkok, Thailand
³ Liver and Digestive Institute, Thonburi Hospital, Bangkok, Thailand

Competing interests

The authors declare that they have no conflict of interest.

Bibliography

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