



A Very Rare Case of Pancreatitis Due to Gastric Balloon

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ABSTRACT

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This study aimed to describe the case of a young woman presenting with abdominal pain, nausea, and vomiting three month after intragastric balloon placement. The patient was diagnosed with acute pancreatitis based on clinical findings, laboratory data, and imaging results. During endoscopy, the balloon was dislodged and obstructed in the second portion of the duodenum. After the removal of the balloon, all the symptoms of the patient were resolved, and she was discharged.

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Introduction

Recently, intragastric balloon has been confirmed as an effective approach to the treatment of weight reduction (1,2). Air-filled intragastric balloon was first used in 1980 (1), and fluid-inflated intragastric balloon is currently available (1). Although this type of balloon is more effective and cause fewer complications comparatively, it has been reported to cause some side-effects in patients (3); such examples are delayed gastric emptying, gastric outlet obstruction, and acute pancreatitis (2-5).

Acute pancreatitis could be of variable, unusual etiologies (6). Duodenal mechanical obstruction is considered to be a major cause of acute pancreatitis, as well as ascariasis (7), duodenal duplication (8), intramural hematoma (5), and intragas-

tric balloon (9).

This study aimed to describe the case of a young female patient with acute pancreatitis as a complication of intragastric balloon.

Case report

A 37-year-old woman referred to the emergency department presenting with abdominal pain, nausea, and vomiting. The pain had initiated from two days before the referral in the epigastrium and left upper quadrant and was radiated to the back. The pain was unremitting and unresponsive to PPT, H2 blockers, antacids, and analgesics.

Upon admission, the patient was restless, conscious, and dehydrated, with the blood pressure of 90/60 mmHg, pulse rate of 110/minute, respira-

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tory rate of 18/minute, and body temperature of 37.2°C. Chest and cardiac auscultation were normal, while the abdominal examination was unremarkable, with the exception of tenderness in the epigastrium and left upper quadrant. In addition, the patient had a history of intragastric balloon placement three months before weight reduction. However, the drug history and family history of the patient were negative.

The patient was admitted to the emergency department and prescribed with intravenous fluid resuscitation, nil per os, and analgesics. The test results of the patient were as follows: white blood cell count=14,000/ml, hemoglobin=12 g/dl, mean corpuscular volume=80 fl, mean cell hemoglobin=29 pg/cell, platelet count=200,000/mm³, blood urea nitrogen=30 mg/dl, creatinine=0.9 ng/ml, sodium=138 meq/l, potassium=4.2 meq/l, blood glucose=96 mg/dl, aspartate aminotransferase=27 U/l, alanine aminotransferase=34 U/l, alkaline phosphatase=270 U/l, amylase=1,100 U/l, lipase=3,400 U/l.

The diagnosis of acute pancreatitis was confirmed based on the clinical presentations and laboratory data of the patient. On the second day of admission, the abdominal pain became more severe and intractable, and the patient had blood pressure of 100/70 mmHg, pulse rate of 120/minute, respiratory rate of 22/minute, and body temperature of 38°C.

Abdominopelvic CT-scan was performed on the patient (Figures 1 & 2), revealing a foreign body in the duodenum. Furthermore, esophagogastroduodenoscopy was carried out, and the intragastric balloon was impacted in the second portion of duodenum. At the next stage, the balloon was drained and extracted (Figure 3).

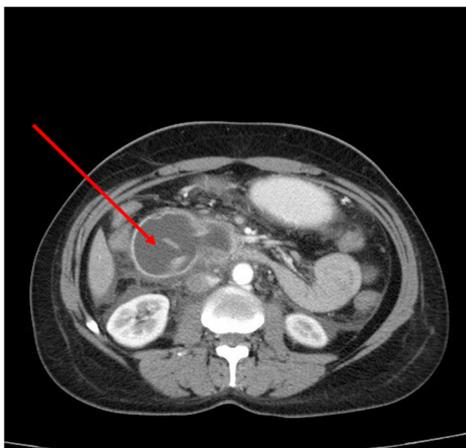


Figure 1. CT Scan of patient. Gasticballon in Duodenum (Redarrow).

On day three of admission, the condition of the patient improved, and she became hemodynamically stable. In addition, the abdominal pain was

resolved, and the patient could properly tolerate a liquid-based diet, followed by a regular diet. Finally, the patient was discharged in good general conditions seven days after admission.

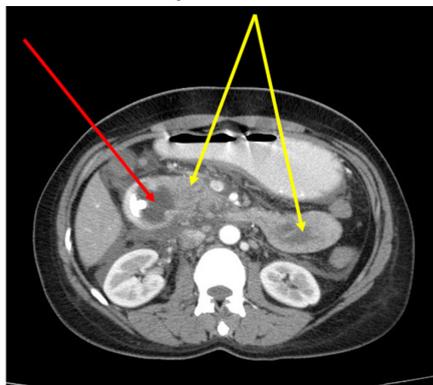


Figure 2. CT Scan of patient. Gasticballon in Duodenum (Red arrow) and sign inflammation in pancreas (yellow arrows).



Figure 3. Impacted balloon in duodenum.

Discussion

Intragastric balloon is a novel approach, which is relatively safer and causes fewer complications compared to the similar techniques. Nevertheless, some unusual complications have been attributed to intragastric balloon placement (2-4, 9).

Although acute pancreatitis is commonly caused by gallstone (42%), alcohol consumption (23%), post-endoscopic retrograde cholangiopancreatography (9.5%), and medications (6.3%), it has been reported to be idiopathic in 12% of the cases (12). To date, few cases of acute pancreatitis due to intragastric balloon have been reported (9,10), and it seems that mechanical duodenal obstruction causing acute pancreatitis may also lead to cholangitis.

The case in the current research was a rare presentation of intragastric balloon complications and acute pancreatitis without biliary obstruction despite duodenal obstruction due to the dislodgement of the intragastric balloon. Another similar case has also been reported in the literature (11). Our patient was diagnosed with acute pancreatitis based on the clinical findings (abdominal pain, nausea, and vomiting), laboratory data (high amylase and lipase levels), and CT-scan criteria.

In the present study, the intragastric balloon

had been inserted three months before the referral of the patient, and she had no problems during this period. However, she referred to the health-care center after two days with complaints of nausea and vomiting. In addition, the patient refused to eat. Conclusively, gastric outlet obstruction did not appear, and the patient was diagnosed with acute pancreatitis.

Due to the unremitting and more severe course of the disease in the patient, abdominal CT-scan was prescribed (Figure 1), which showed a foreign body in the duodenum while no balloon was observed in the stomach. Therefore, the researchers attempted to realize the condition as to what occurred to the intragastric balloon.

The patient was transferred to the endoscopy room, and the esophagus and stomach were observed to be normal. Interestingly, the balloon was drained partially and dislodged to the second portion of the duodenum. As such, the balloon was completely drained and extracted (Figure 2). Following that, all the symptoms of the patient were resolved within 24 hours.

According to the literature search for English articles in PubMed, one case of acute pancreatitis has been reported, in which the intragastric balloon properly located in the stomach, causing acute pancreatitis due to the pressure effect of the balloon on the pancreas (10). Furthermore, another case of acute pancreatitis due to intragastric balloon has been reported in the current literature. In this case, the balloon was not displaced, while the catheter had migrated to the second portion of the duodenum. Consequently, acute pancreatitis occurred due to the pressure effect of the catheter, thereby leading to ischemia and inflammation (9).

The researchers believe that although intragastric balloon is a safe method commonly used for weight reduction, the possible complications should not be overlooked in the patients. It is also notable that cases of acute pancreatitis with no usual cause should be promptly assessed in terms of etiology in order to provide rare and unusual case reports (5-7, 9).

Conclusion

Considering the increased use of intragastric balloon for weight reduction, the possible complications of this method must be further investigated. Moreover, rare etiologies of acute pancreatitis without usual causes and unremitting disease course should be adequately studied.

Acknowledgements

None.

Conflict of Interest

The authors declare no conflict of interest.

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