CASE REPORT

Haemoptysis and left upper quadrant abdominal pain: an unusual presentation of partial thoracic migration of an adjustable gastric band's tube

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SUMMARY

Laparoscopic gastric banding is considered the safest bariatric procedure, holding satisfactory long-term weight loss results, low rates of early complications and negligible mortality. Long-term follow-up are showing a high prevalence of late complications. We describe the case of a 40-year-old female patient, with a medical history of laparoscopic gastric banding, admitted in the emergency department complaining of haemoptysis, left upper quadrant abdominal pain and a slight tachycardia. After an exhaustive clinical evaluation with laboratorial and radiological assessments, diagnosis of partial thoracic migration of the band's tube was established. Despite the unusual clinical setting, this case emphasises the necessity of awareness for the potential long-term complications of gastric banding either from primary or secondary care providers.

BACKGROUND

According to the WHO, morbid obesity is a 21st century epidemic.¹ Among the surgical treatment options, laparoscopic gastric banding remains a safe, efficient and minimally invasive restrictive procedure in treatment of morbidly obese patients,^{2 3} claiming acceptable medium-term results.⁴ Nonetheless, despite very low short-term complication rates,⁵ longstanding follow-up demonstrates a high long-term complications incidence.⁶

We present a case of partial thoracic migration of an adjustable gastric band's tube presenting with haemoptysis and left upper quadrant abdominal pain.

CASE PRESENTATION

A 40-year-old female patient was admitted to the emergency department with haemoptysis and left upper quadrant abdominal pain. There was no history of trauma, cough, thoracalgia or fever. The abdominal pain was constant and unrelated with chest wall movements. She had a medical history of hypothyroidism and bariatric surgery (laparoscopic gastric banding) 2.5 years before, complicated by recurrent infections of the insufflation port, requiring its disconnection and removal with placement of the tube in the abdominal cavity, 18 months after the surgical procedure. At examination, she was slightly tachycardic but normotensive and eupnoeic.

INVESTIGATIONS

Arterial gasometry and blood tests were normal. The ECG displayed a slight sinus tachycardia

Figure 1 Chest x-ray displaying the adjustable gastric band's tube above the left hemidiaphragm.

(100 bpm). The chest x-ray exhibited a strange artefact above the left hemidiaphragm without pleural or parenchymal changes (figure 1). A chest CT-scan revealed that part of the gastric band's tube migrated through the diaphragm up to the left hemithorax (figures 2–4).

DIFFERENTIAL DIAGNOSIS

In the presence of a morbidly obese patient with haemoptysis, left upper quadrant abdominal pain and tachycardia, our initial concern was to rule out pulmonary thromboembolism. Despite the absence of dyspnoea and chest pain, a pulmonary emboli affecting the left lower lobe of the lung could originate the patient's complaints, even in the presence of a normal arterial gasometry. The artefact above the left hemidiaphragm discovered in the chest x-ray drew our attention, leading to the CT scan that revealed the final diagnosis.

TREATMENT

By laparoscopic approach, the adjustable gastric band was removed and the small diaphragmatic defect was closed.

OUTCOME AND FOLLOW-UP

The surgery was performed without complications with an uneventful postoperative recovery.

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Figure 2 Chest CT-scan showing the intrathoracic adjustable gastric band's tube (red arrow).

DISCUSSION

Morbid obesity represents a major concern for both primary and secondary health care providers, with its prevalence increasing throughout industrialised nations.⁷ Since conservative approaches—such as dietary regimens, pharmaceutical treatments and physical exercise plans—are almost always unsuccessful in longstanding weight loss,⁸ bariatric surgery remains the only durable treatment. Gastric banding is recognised as the less invasive procedure, associated with very low rates of short-term complications and almost absent mortality.⁹ Those facts, associated with its recognised ability to improve many morbid obesity associated comorbidities, stimulated many surgeons to expand its use.

Despite being able to provide long-lasting weight loss, longer follow-up of most series exhibits a high prevalence of long-term complication rates, with some studies exposing that they tend to increase constantly over time, according to a linear pattern.^{6–10} The most common long-term complications are: band slippage, leaks from the port-catheter system, band erosion/migration, oesophageal dilatation, port infection, disruption of the tube and rotation of the port.¹⁰ Of those, band migration embodies a major late complication, ranging from 0.6 to 1%.¹¹ Even if intragastric migration is the most common, other migration sites have been described, such as intracolonic band migration.^{12–13} Migration has been attributed to local seromuscular damage and/or functional pressure of a foreign body against other organs.¹⁴

Figure 3 Chest CT-scan reconstruction (coronal plane) exhibiting the intrathoracic adjustable gastric band's tube (red arrow) and the adjustable gastric band around the stomach in the abdominal cavity (blue arrow).

Figure 4 Chest CT-scan reconstruction (sagittal plane) displaying the intrathoracic adjustable gastric band's tube (red arrow).

The patient referred in this case report suffered initially from a chronic recurrent infection at the port site, unresponsive to antibiotic treatment, surgical drainage and port reinsertion at a distant place. In order to quell the infection, the port was disconnected and removed, with the band tubing being placed in the abdominal cavity, as performed in other bariatric centers, to avoid infection and erosion of the band.¹⁵ Six months later, the patient presented to the emergency department with haemoptysis and abdominal pain due to partial thoracic migration of the tube.

Even if we are not aware, to the best of our knowledge, of any similar case reported in the literature, our primary goal is not to describe it but to alert for the potential outcomes of long-lasting intraabdominal foreign bodies, such as adjustable gastric bands. It should be noted that, although this case was the consequence of an intentional disconnection and intraabdominal placement of the tube, the same result could happen with another of the most common late complications—tube disconnection. Most series exhibit increased loss to follow-up patients with time, due to demotivation to attend medical appointments after achieving long-lasting weight loss. This fact highlights the need for awareness and high index of suspicion either from primary or secondary care providers when examining patients with atypical clinical conditions and medical history of gastric banding procedure.

Learning points

- ▶ Despite being able to provide long-lasting weight loss and very low short-term complication rates, laparoscopic adjustable gastric banding yields an increasing long-term complications incidence.
- ▶ Gastric banding complications may range from subtle troubles to more complex hurdles, such as in this case report.
- ▶ Concern and suspicion of complications should be raised when patients with a medical history of adjustable gastric banding placement present with abdominal and/or thoracic complaints, especially if findings are atypical.

Competing interests None.

Patient consent Obtained.

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