

## Lung Abscess: An Unusual Complication of Gastric Banding

Eyal Zimlichman MD<sup>1</sup>, Milena Pitashny MD<sup>1</sup>, Eli Konen MD<sup>2</sup> and Martine Szyper-Kravitz MD<sup>1</sup>

Departments of <sup>1</sup>Internal Medicine B and <sup>2</sup>Radiology, Sheba Medical Center, Tel Hashomer, Israel  
Affiliated to Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel

**Key words:** lung abscess, gastric banding, esophagitis

*IMAJ 2005;7:742–743*

The obesity epidemic throughout most of the developed world has led to a considerable rise in mortality and morbidity of patients, with a major impact on health expenditures. This has led to the development of numerous weight reduction strategies, either surgical or pharmacologic. With recent advances in obesity surgery, there are now minimally invasive methods of achieving and sustaining significant weight loss. Since the early 1990s the laparoscopic adjustable silicone banding (LAP-BAND) has rapidly gained acceptance and is now considered the most common bariatric operation. The accumulated experience with this surgical method has established the LAP-BAND procedure as a safe and effective method [1,2]. We report here an unusual late complication in a patient who underwent a LAP-BAND procedure.

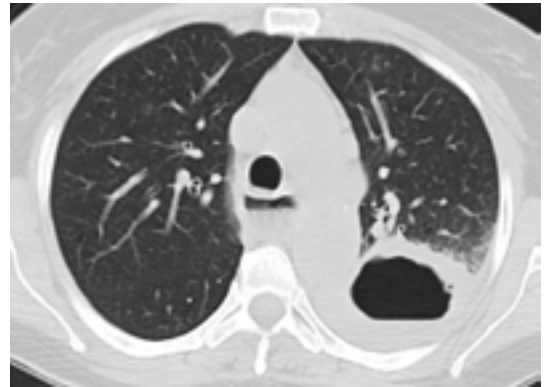
### Patient Description

A 50 year old woman presented to our department with fever, cough and dyspnea that had started 5 days prior to her admission. She had a fever of 40.0°C, and complained of pain in her left shoulder during inspiration. The patient ruled out chronic lung disease or former episodes of lower respiratory tract infections, and was a former 15 pack-year cigarette smoker. Her medical history was notable for adult-type diabetes mellitus and hypertension – both treated and under control. Three years prior to her admission, due to morbid obesity (body mass index 43), the patient underwent a laparoscopic adjustable silicone banding procedure at another hospital. The procedure was performed without complications. Her current BMI was 32.

BMI = body mass index

On admission her chest X-ray revealed a round cavitory lesion measuring 4–5 cm on the left upper lobe with an air-fluid level, surrounded by an interstitial infiltrate. Computed tomography of the thorax demonstrated a large abscess in the posterior segment of the left upper lobe, pneumonitis of the surrounding lobes, and an esophageal air-fluid level, suggesting a distal obstruction or stenosis of the esophagus [Figure]. Blood laboratory analysis revealed leukocytosis (11,960/ $\mu$ l), hypochromic-microcytic anemia (hemoglobin count 9.8 g/dl), and thrombocytosis (561,000/ $\mu$ l); chemistry analysis was normal. Blood cultures were sterile, while sputum cultures demonstrated a mixed growth of gram-positive cocci. PPD skin testing, sputum stain for acid-fast bacilli, and later mycobacterial culture were all negative, ruling out tuberculosis. A left upper lobe lung abscess was diagnosed, and treatment with intravenous amoxicillin and clavulanic acid was initiated with clinical improvement and receding fever. Following 5 days of intravenous antibiotic treatment the patient was discharged on oral treatment for another month. On follow-up CT of the thorax 1 month after discharge the abscess was no longer visible, although pneumonitis of the surrounding lobes was still seen.

Indeed, on admission, the patient described symptoms of food regurgitation, vomiting after meals and heartburn that started following her LAP-BAND procedure. She was unable to eat solid meals and could only swallow triturated food. Following our recommendation, the patient underwent a laparoscopic widening



Axial CT image of the thorax showing a large abscess in the posterior segment of the left upper lobe. Note an esophageal air-fluid level suggesting a distal obstruction or stenosis of the esophagus.

of the silicone gastric band, leading to amelioration of the symptoms.

### Comment

Laparoscopic adjustable gastric banding has become the most common bariatric operation in recent years due to its low perioperative co-morbidity, short hospitalization, and low complication rate. Numerous prospective follow-up studies were performed during the last decade to measure both success rates and complications [1]. In these studies, most early and late complications were band-related complications (such as band slippage, pouch dilation, band erosion and wound related). However, a recently published 10 year follow-up study on patients after LAP-BAND operation demonstrated a high incidence of late complications. One-third of the patients underwent band removal, while more than half the patients (54%) experienced postoperative complications requiring hospital treatment. The most important late complications were esophagitis (30%), and obstruction due to pouch dilatation (21%) [2].

Indeed, the patient presented here was diagnosed with a rare complication of gastric banding operation. The presentation of a community-acquired lung abscess in a relatively young, immune-competent woman, without a history of recent pneumonia or chronic lung disease, is uncommon and prompts further investigation [3]. Considering the patient's complaints and esophageal findings on CT scan, our patient had iatrogenic distal esophageal stenosis, and esophageal reflux disease related to her banding operation. Complaints of food regurgitation and aspiration (mainly nocturnal) were not present prior to her surgery (despite her severe obesity), and provide an etiologic link to the development of the lung abscess. Although pulmonary abscess has been described as complications of esophageal disease [4], we were surprised to find no reports of

this complication following gastric banding surgery. Even though we have not proven the etiologic link between the operation and the abscess, the temporal sequence of the events implies a strong etiologic relationship.

Our case represents an unusual complication of gastric banding operation. Even though LAP-BAND procedures have proven their effectiveness in obesity control and improvement in quality of life [5], we suggest that long-term complications be taken into account and discussed with the patients prior to surgery.

---

## References

1. Szold A, Abu-Abeid S. Laparoscopic adjustable silicone gastric banding for morbid obesity: results and complications in 715 patients. *Surg Endosc* 2002;16(2):230-3.
2. Martikainen T, Pirinen E, Alhava E, et al. Long-term results, late complications and quality of life in a series of adjustable gastric banding. *Obes Surg* 2004;14(5):648-54.
3. Hammond JM, Potgieter PD, Hanslo D, Scott H, Roditi D. The etiology and antimicrobial susceptibility patterns of microorganisms in acute community-acquired lung abscess. *Chest* 1995;108(4):937-41.
4. McArthur MS. Pulmonary complications of benign esophageal disease. *Am J Surg* 1986;151(2):296-9.
5. Dixon JB, Dixon ME, O'Brien PE. Quality of life after lap-band placement: influence of time, weight loss, and comorbidities. *Obes Res* 2001;9(11):713-21.

---

**Correspondence:** Dr. E. Zimlichman, Dept. of Medicine B, Sheba Medical Center, Tel Hashomer 52621, Israel.  
 Phone: (972-3) 530-2661  
 Fax: (972-3) 535-2855  
 email: zimlich1@zahav.net.il