Critical tracheal stenosis caused by mediastinal lipomatosis: Long-term efficacy of airway stenting

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Mediastinal lipomatosis is a rare benign disease caused by accumulation of mature adipose tissue within the mediastinum, generally in the anterior compartment.¹ The occurrence of this disease is generally related to endogenous or exogenous steroid excess or to obesity.

This condition is asymptomatic in most cases^{1,2}; however, symptoms related to mass effect may be present and are more frequently due to lung compression. Symptoms usually include dyspnea, cough, and chest pain. Hemidiaphragm elevation, caused by paralysis of the phrenic nerve, has also been described in some cases.³ Critical situations such as significant tracheal compression and ventricular outflow obstruction have been reported as anecdotal findings in the literature.³⁻⁵

We report here the exceptional case of a patient with severe tracheal stenosis caused by huge mediastinal lipomatosis who was effectively treated with airway stenting.

CLINICAL SUMMARY

A 78-year-old man was seen with cough and increasing dyspnea during the last year. Recurrent episodes of asphyxia were provoked when the patient assumed the prone position or with anterior chest flexion. During this period, the patient underwent pulmonary function tests showing a marked obstruction of the extrapulmonary airway (peak expiratory flow of 35.7%) and moderate restrictive disease (forced vital capacity of 68.3%).

Chest radiography documented a marked widening of the mediastinum. Subsequent computed tomographic scan showed a huge mass in the anterior and middle mediastinum extending principally on the right side of 12 × 10 × 12 cm diameter (longitudinal, transverse, and anteroposterior) and fat density, suggesting the diagnosis of mediastinal lipomatosis. Histologic findings at fine-needle aspiration biopsy were

consistent with this diagnosis. Associated critical restriction of the lower trachea was present (Figure 1). Fiberoptic bronchoscopy confirmed a deviation of the tracheal axis toward the left side with significant stenosis (about 80% reduction) of the airway lumen. There was no history of obesity, Cushing syndrome, or long-term steroid intake.

Because of coexisting severe cardiac disease, the patient was judged at high operative risk, and surgical resection was considered not indicated. Through rigid bronchoscopy, a Dumon stent (20 × 50 mm studded cylindric silicone prosthesis; Novatech, Abayone, France) was placed at the level of the tracheal stenosis, achieving complete restoration of the airway lumen.

The postoperative course was uneventful, with normalization of the respiratory condition and patient discharge on postoperative day 1. The patient is in clinically stable condition and good respiratory status after 4 years. Clinical follow-up with bronchoscopy and computed tomographic scan performed every 6 months has documented complete patency of the airway lumen with the tracheal prosthesis in place (Figure 2). No late complications occurred. Additional bronchoscopies (1 to 2 per year) have been performed during the follow-up period to ensure optimal toilet of the airway and tracheal stent. Follow-up controls and additional bronchoscopies have been performed as outpatient procedures.

DISCUSSION

Mediastinal lipomatosis is a benign disease, but presentation as large mass is possible and severe symptoms related

FIGURE 1. Computed tomographic image showing the huge lipomatous mass in the anterior and right middle mediastinum with associated critical stenosis of the lower trachea.

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FIGURE 2. Computed tomographic image showing the endotracheal stent in place allowing complete patency of the airway after 4 years.

to compression may occur. Symptoms related to lung or airway compression include cough, chest pain, dysphonia, and even significant dyspnea and stridor. Episodes of asphyxia or respiratory insufficiency consequent to critical tracheal or bronchial stenosis, however, have been reported only as anecdotal findings.^{4,5}

In cases of asymptomatic disease, no operative treatment is indicated; when symptoms related to mass effect are present, however, complete surgical resection or debulking can be required.^{1,3} In some cases related to exogenous steroid excess, symptomatic relief can be obtained by the simple reduction of the steroid consumption.⁵

In the presence of significant airway compression, stenting of the restricted lumen may be a viable alternative justified by the benign behavior of the lipomatous mass, with slow growth and soft consistency. Very limited data have been reported in the literature, however, to assess the reliability of this therapeutic option at long term.

Durable efficacy of the endoscopic treatment reported in this case proves that when the critical mass effect is limited to the trachea and surgical resection poses a high risk, restoration of respiratory wellness can be obtained by simple airway stenting. This case report challenges the widely held concern that long-term stents should not be used in the setting of benign disease.

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An unusual presentation of esophageal metastasis from breast cancer

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Breast cancer metastases to the esophagus are rare, affecting 0.6% of patients with breast cancer.¹ This rarity may present a diagnostic challenge related to the

infrequency and the lengthy disease-free survival often seen before metastatic presentation. We present a rare case report of esophageal metastasis from breast cancer after a 13-year disease-free interval.

CLINICAL SUMMARY

A 62-year-old woman was seen at our institution for consideration of esophagectomy as the result of a recalcitrant esophageal stricture noted to be benign on biopsy. She had experienced significant dysphagia to all but liquids since 2007 and during that interval had a 60-pound weight loss despite monthly esophageal dilations. The patient had a previous history of left-sided lobular breast cancer treated with lumpectomy, axillary dissection, and adjuvant chemoradiation therapy in 1994. The stricture was

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