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CLINICAL INFORMATION

Anesthetic management of a large mediastinal mass for tracheal stent placement

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KEYWORDS

Anesthetic management; Mediastinal mass; Laryngeal mask airway; Tracheal stent **Abstract** The anesthetic management of patients with large mediastinal masses can be complicated due to the pressure effects of the mass on the airway or major vessels. We present the successful anesthetic management of a 64-year-old female with a large mediastinal mass that encroached on the great vessels and compressed the trachea. A tracheal stent was placed to relieve the tracheal compression under general anesthesia. Spontaneous ventilation was maintained during the perioperative period with the use of a classic laryngeal mask airway. We discuss the utility of laryngeal mask airway for anesthetic management of tracheal stenting in patients with mediastinal masses.

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PALAVRAS-CHAVE

Anestesia; Doenças do Mediastino; Máscaras laríngeas; Stents

Manejo anestésico de grande massa mediastinal para a colocação de stent traqueal

Resumo O manejo anestésico de pacientes com grandes massas situadas no mediastino pode ser complicado por causa dos efeitos da pressão da massa sobre as vias aéreas ou grandes vasos. Relatamos o manejo anestésico bem-sucedido de uma paciente de 64 anos com uma grande massa mediastinal que invadiu os grandes vasos e comprimiu a traqueia. Um *stent* traqueal foi colocado para aliviar a compressão da traqueia, sob anestesia geral. A ventilação espontânea foi mantida durante o período perioperatório com o uso de uma máscara laríngea clássica. Discutimos a utilidade da máscara laríngea para o manejo da colocação de *stent* traqueal em pacientes com massas situadas no mediastino.

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Introduction

Mediastinal tumors that are large enough to cause compression of airway or major vessels pose a significant risk for

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216 S. Rajagopalan et al.

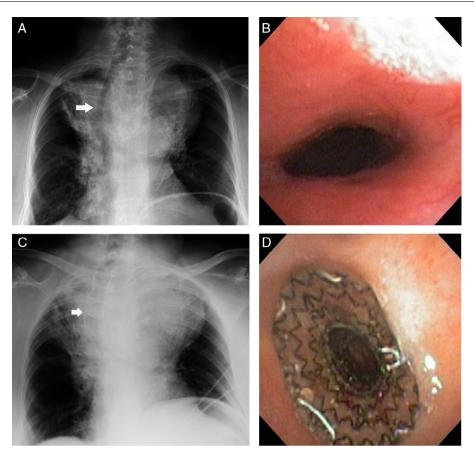


Figure 1 (A) Chest X-ray showing a large mediastinal mass with marked deviation of the trachea to the right with tracheal compression, (B) bronchoscopic view of the trachea showing the narrowing, (C) chest X-ray after the stent placement showing the stent in the trachea, and (D) bronchoscopic view of the tracheal stent.

cardiopulmonary complications. Catastrophic hypoxia, vascular complications and cardiac arrest can occur during the perioperative period and have been reported in both the adult¹ and pediatric populations.^{2,3} Further, the use of muscle relaxants and positive pressure ventilation during general anesthesia has been associated with an increased risk of airway collapse.⁴ We report the general anesthetic management of a patient who underwent tracheal stenting for a large mediastinal tumor while maintaining spontaneous ventilation with a laryngeal mask airway (LMA).

Clinical report

A 64-year-old female with a medical history remarkable for hypertension and asthma was diagnosed with a sarcomatoid carcinoma of the lung. This tumor measuring $9.3\,\mathrm{cm}\times9.0\,\mathrm{cm}\times11.7\,\mathrm{cm}$ encroached on the anterior mediastinum. Due to the advanced stage of the cancer, she was considered a poor surgical candidate. She received chemotherapy with adriamycin, ifosfamide and mesna in conjunction with radiotherapy. She remained relatively asymptomatic after therapy for a period of 5 years after which she presented to us with worsening dyspnea, cough and hoarseness of voice of one month duration. The dyspnea was worst on lying flat than in the semi-recumbent position. The chest X-ray revealed a large mediastinal mass

with marked deviation of the trachea to the right with tracheal compression (Fig. 1A). The CT scan confirmed that the mediastinal mass had increased in size and, now measured $10.3 \, \text{cm} \times 10.4 \, \text{cm} \times 12.7 \, \text{cm}$. It encroached on the great vessels and trachea, causing significant tracheal compression and deviation (Fig. 2). As the predominant symptom was



Figure 2 CT scan showing the large mediastinal mass measuring $10.3\,\text{cm}\times10.4\,\text{cm}\times12.7\,\text{cm}$ encroaching on the great vessels and trachea causing tracheal compression and deviation.

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