ANESTHETIC MANAGEMENT FOR A LARGE MEDIASTINAL MASS

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Purpose: To report the anesthetic management strategy for a large (19 x 12 x 8 cm) anterior mediastinal mass.

Clinical Features: The mass was detected incidentally in a 46 year-old woman who presented due to symptoms of a pelvic mass. Radiological investigations revealed a right sided mass with compression of the superior vena cava, and possible right atrium compression. The patient showed no respiratory or hemodynamic symptoms while at rest, with change of position, or with exertion. Pulmonary function tests were within normal limits and without flow limitation. Anesthetic management began with the placement of a thoracic epidural catheter for post operative analgesia. Central venous catheters were inserted into the right internal jugular and left femoral veins, and invasive blood pressure monitoring was obtained. The patient was prepared for possible cardiopulmonary bypass. A Glidescope was used for awake intubation with a double lumen tube; placement was verified using a fibreoptic bronchoscope. General anesthesia was subsequently induced with sevoflurane and the patient continued to breath spontaneously. The patient was then placed in left lateral decubitus position without hemodynamic or respiratory compromise allowing for surgery to begin. Transesophageal echocardiography showed compression of the right atrium, but otherwise normal cardiac function. At this time the surgical team requested optimized conditions with neuromuscular blockade. Given the results of the TEE, rocuronium was administered and positive pressure ventilation started without hemodynamic or ventilatory compromise. The tumour was resected en mass and pathology confirmed a mature teratoma. The patient was extubated in the post anesthesia care unit without incident and continues to do well today. Patient consent was obtained to publish this case.

Conclusion: Anterior mediastinal masses present anesthetic challenges due to the possibility of airway and hemodynamic collapse. Continuous monitoring and evaluation of the patient provides a safe, step-by-step strategy for anesthetic management. Intraoperative transesophageal echocardiography provides vital information in these cases.

References:
Anesthesiology 1984: 60:144–7
Int Anesth Research Society 2006 103: 578-589
Anaesthesia 1999 54:670-682
Anesthesiology Clin 2008 26: 305-314
Current Opinion in Anaesthesiology 2007 20: 1-3
J Cardiothoracic and Vascular Anesth 2001 15: 233-236
Chest 2001 120: 1152-1156

Resected anterior mediastinal mass; a mature teratoma measuring 19 x 12 x 8 cm.