Infantile Hemangioma in the Airway

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When a clinician sees a patient with biphasic stridor, a nearly occlusive tracheal mass with fixed tracheal obstruction should be considered. Microlaryngoscopy of an otherwise healthy 5-month-old with biphasic stridor detected normal vocal cords, a normal subglottic trachea and a large mass (fig.). Due to the unclear nature of the mass, biopsy was performed, which demonstrated a hemangioma (fortunately bleeding was easily controlled). The patient was transported to the intensive care unit for mechanical ventilation so computed tomographic imaging could be performed, which was negative for additional hemangiomas. Ultimately, the lesion improved with medical (propranolol) therapy.

Infantile hemangiomas (IH) are most commonly benign endothelial neoplasms. A PubMed search reveals nothing in the recent anesthesiology literature to clue clinicians about potential anesthesia-related morbidity. Intratracheal IH may present with life-threatening airway obstruction and an untreated mortality of 50%. IH of the head and neck may warrant evaluation for PHACES syndrome (posterior fossa malformations–hemangiomas–arterial anomalies–cardiac defects–eye abnormalities–sternal cleft and supraumbilical raphe syndrome), which is associated with anesthesia-relevant cardiac defects, vascular anomalies such as aortic coarctation, and neurologic/cerebrovascular anomalies including absent carotid arteries with extensive collateralization (similar to Moya-Moya).

First-line therapy for IH has changed dramatically from corticosteroid or chemotherapeutic administration, local therapy (laser or intralesional injection), or surgical resection to systemic β-adrenergic blockade. The usual propranolol dose regimen for IH is a gradual escalation up to 2 mg kg⁻¹ day⁻¹ (oral), divided every 8 h. The use of systemic β-adrenergic blockade is novel in pediatric patients without congenital heart disease, and anesthesiologists must be aware of the medication risk and adverse perioperative events in this vulnerable population.

Competing Interests
The authors declare no competing interests.

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References