PYOGENIC GRANULOMA OF THE LARYNX: A RARE CAUSE OF HEMOPTYSIS

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Abstract

Educational objective: At the conclusion of this presentation, the participants should be able to discuss management of pyogenic granuloma of the larynx in a pregnant patient.

Objectives: Pyogenic granuloma, also called lobular capillary hemangioma or granuloma gravidarum, classically occurs during pregnancy. It is uncommon in the airway. This case report describes a rare clinical situation and perhaps the only reported presentation of pyogenic granuloma in the larynx causing hemoptysis at a late stage of pregnancy.

Study design: Case Report

Results: A 23 year old female presented for laryngology consultation in her third trimester of pregnancy for evaluation of hemoptysis. A vascular, right false vocal cord neoplasm was identified. Given the concern for hemorrhage and airway compromise during delivery, the patient underwent elective induction at 38 weeks gestation in the high-risk obstetrical unit with otolaryngology on stand-by. Delivery was uneventful and the neoplasm was removed via microlaryngoscopy 6 weeks later. Pathology was consistent with pyogenic granuloma.

Conclusions: Pyogenic granuloma is a common tumor of pregnancy but rarely involves the larynx. In the case of airway involvement, it is best managed in coordination with the high-risk obstetrical team and can be removed safely via standard microsurgical techniques.

Introduction

Pyogenic granuloma (PG), also called lobular capillary hemangioma (LCH), is a vascular tumor characterized by its distinct appearance on pathology with proliferation of capillary sized vessels arranged in lobules. Considered a benign tumor, these lesions most frequently occur on mucous membranes and the skin.1,2

The occurrence of mucosal pyogenic granuloma has been associated with hormonal changes, with a higher incidence in men in the first two decades of life and then changes to preponderance for women during childbearing years. Classically, these lesions have been reported to appear during pregnancy and regress after parturition. For this reason, they are also called granuloma gravidarum.

Most commonly, PG appears on the gingival mucosa, lips, fingers and face. Reported incidences of this lesion occurring in the airway have been associated with antecedent trauma.3,4 However, the argument has been made that traumatic vocal cord granulomas due to phonotrauma, intubation or laryngopharyngeal reflex5 are frequently misclassified as pyogenic granuloma, while the pathologic diagnosis would more accurately be described as simple granulation tissue.6 In fact, it has been claimed that pyogenic granuloma (lobular capillary hemangioma) does not occur in the larynx or trachea.6

Case Report

A 23 year old female presented for Laryngology consultation in her third trimester of pregnancy for evaluation of hemoptysis. She reported symptoms which initially had included throat pain described as burning pain, progressing to episodes of scant hemoptysis when sneezing or coughing. During week 20 of gestation, she experienced an episode of frank hemoptysis and presented to the Emergency Room where she was referred to gastroenterology for evaluation. During week 26 of gestation, while on an anti-reflux regimen, she had a second episode of hematemesis associated with new symptoms of subjective dyspnea and globus sensation. Finally, after evaluation by gastroenterology for refractory “GERD” and hematemesis, she was referred to ENT clinic. Upon evaluation by the Laryngologist at 36 weeks gestation, she was found to have a vascular, right false vocal cord neoplasm on flexible laryngoscopic examination (see images). At that point, a collaborative discussion regarding the patient’s treatment was undertaken by the Laryngologist and the high-risk obstetrical team. Given the concern for hemorrhage and airway compromise during delivery, it was recommended that the patient undergo elective induction at 38 weeks gestation in the high-risk obstetrical unit with otolaryngology on stand-by and a difficult airway cart available. It was also recommended that excision of her lesion be scheduled for the day following delivery to prevent morbidity associated with further hemoptysis. Delivery was uneventful, however the patient refused to proceed with scheduled excision the next day. The neoplasm was removed via suspension microlaryngoscopy with KTP laser excision 6 weeks later.

Intraoperatively, the lesion was noted to be pedunculated and anchored on the medial arytenoid by a vascular appearing stalk. Surgical pathology was consistent with lobular capillary hemangioma (pyogenic granuloma). The patient did not experience lasting morbidity due to this neoplasm nor its treatment.

Discussion

This case report describes a rare clinical situation and perhaps the only reported presentation of pathologically confirmed pyogenic granuloma (lobular capillary hemangioma) in the larynx causing hemoptysis at a late stage of pregnancy. Notably, the patient did not have antecedent trauma to the larynx and her neoplasm presented in a region not associated with phonotrauma.

Conclusions

Pyogenic granuloma is a common tumor of pregnancy but rarely involves the larynx. In the case of airway involvement, it is best managed in coordination with the high-risk obstetrical team and can be removed safely via standard microsurgical techniques.

References


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