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A Rare Case of Tongue Hemangioma in a 33-Week Pregnant Woman: Multidisciplinary Management and Obstetric Considerations

Kareena Rai[1]*, Rupali Goyal[2] and Harsh Rastogi[3]

[1]*DNB Resident, Department of Obstetrics and Gynecology, Indraprastha Apollo Hospitals, India*

[2]*Senior Consultant, Department of Obstetrics and Gynecology, Indraprastha Apollo Hospitals, India*

[3]*Senior Consultant, Intervention Radiology, Indraprastha Apollo Hospitals, India*

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***Corresponding author:** Dr. Kareena Rai, Department of Obstetrics and Gynecology, Indraprastha Apollo Hospitals, New Delhi – 110076, India

Abstract

Hemangiomas are benign vascular tumors predominantly occurring in the head and neck region, but their manifestation on the tongue during pregnancy is extremely rare. We present a unique case of a 25-year-old gravida 2, para 1 woman at 33 weeks of gestation who presented with spontaneous intermittent bleeding from the lateral border of her tongue, associated with blood-tinged sputum. The diagnosis was clinically suspected as a hemangioma and confirmed by angiography, as MRI could not be performed due to active bleeding.

Angiography revealed a diffuse vascular blush with hypertrophied branches of the external carotid artery. Under a multidisciplinary team approach, super-selective embolization of the feeding vessels was successfully performed under general anesthesia with fetal shielding. The procedure resulted in significant reduction in vascularity, and the patient was discharged hemodynamically stable.

Two weeks later, at 36 weeks of gestation, the patient presented again with recurrent bleeding from the lesion. Given the teratogenic risk of sclerosing agents, a multidisciplinary team opted for elective lower segment cesarean section (LSCS) following blood transfusion. Definitive management with sclerotherapy was performed in the postpartum period, resulting in complete resolution and no further bleeding.

This case emphasizes the importance of multidisciplinary collaboration and staged management—antenatal embolization followed by postpartum sclerotherapy—for ensuring optimal maternal and fetal outcomes in rare oral vascular lesions.

Keywords: Tongue hemangioma; Pregnancy; Embolization; Sclerotherapy; Multidisciplinary management; Oral vascular lesion

Abbreviations: MRI: Magnetic Resonance Imaging; DSA: Digital Subtraction Angiography; LSCS: Lower Segment Cesarean Section; PVA: Polyvinyl Alcohol

Introduction

Hemangiomas are benign proliferations of endothelial cells and are among the most common vascular tumors. However, intraoral hemangiomas—particularly those involving the tongue—are rare, accounting for less than 1% of all cases. During pregnancy, elevated estrogen and progesterone levels, together with increased blood volume, can accelerate the growth of vascular lesions and precipitate bleeding.

Their occurrence in pregnancy presents diagnostic and therapeutic challenges due to concerns regarding fetal safety, anesthetic risk, and teratogenic potential of certain therapeutic agents. This report describes a rare case of tongue hemangioma during pregnancy, managed successfully through staged multidisciplinary interventions.

Case Report

A 25-year-old gravida 2, para 1 woman at 33 weeks of gestation presented with spontaneous bleeding from the left lateral border of the tongue and blood-tinged sputum. There was no preceding trauma or prior history of oral lesions. Examination revealed a

soft, compressible, bluish-red lesion (2 × 2cm) on the left lateral tongue, which bled on touch.

Vital parameters were stable. Hemoglobin was 9.1g/dL, and fetal non-stress test was reactive. A clinical diagnosis of tongue hemangioma was made. MRI was deferred due to active bleeding, and diagnostic **digital subtraction angiography (DSA)** was planned. DSA demonstrated diffuse vascular blush from hypertrophied branches of the left lingual and facial arteries originating from the external carotid artery.

Under multidisciplinary guidance, **super-selective embolization** using polyvinyl alcohol (PVA) particles was performed under general anesthesia with lead abdominal shielding. Post-embolization angiogram showed marked reduction in vascularity. The patient remained stable and was discharged after observation.

Recurrent Presentation and Definitive Management

Two weeks later, at 36 weeks' gestation, she presented with recurrent bleeding from the lesion. Hemoglobin was 8g/dL. A multidisciplinary meeting involving obstetricians, anesthesiologists, radiologists, and ENT surgeons concluded that **definitive sclerotherapy** was required. However, as sclerosing agents are teratogenic, a decision was made to deliver the fetus first.

After transfusion of two units of packed red cells, an **elective LSCS** was performed under regional anesthesia, resulting in the birth of a healthy neonate. In the postpartum period, sclerotherapy using **sodium tetradecyl sulfate** was carried out safely under ENT and radiology supervision. The patient recovered uneventfully, with no recurrence or further bleeding during six-week follow-up.

Results

Successful hemostasis was achieved after initial embolization, though partial revascularization occurred at two weeks. Postpartum sclerotherapy achieved complete resolution, with no further bleeding episodes. Fetal outcome was satisfactory, and both mother and child remained healthy on follow-up.

Discussion

Tongue hemangioma in pregnancy is an exceptionally rare occurrence. Hormonal and hemodynamic changes, such as elevated estrogen and increased cardiac output, can enhance endothelial proliferation and lesion vascularity, predisposing to bleeding.

MRI and MR angiography are preferred imaging modalities for defining lesion extent and flow type. However, **angiography** provides a unique advantage of real-time diagnosis and therapeutic potential via embolization when urgent hemostasis is required.

Super-selective embolization is a minimally invasive and safe antenatal procedure when performed with fetal shielding. Recurrence may occur due to collateral circulation or incomplete occlusion. **Sclerotherapy** offers definitive control but is contraindicated during pregnancy due to teratogenic risks. Hence, delivery before sclerotherapy ensures fetal protection.

The present case demonstrates the value of **staged multidisciplinary management**: antenatal embolization for stabilization and postpartum sclerotherapy for curative treatment. Such coordination among obstetricians, radiologists, anesthetists, and ENT surgeons is essential in managing rare vascular lesions during pregnancy [1-10].

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