Pyogenic Granuloma in Pregnancy – A Case Study

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Abstract

Introduction: Occurrence of pyogenic granuloma in pregnancy is rare and literature exists only on two cases of non-oral pyogenic granuloma in pregnancy. We report a primi gravida at 36 weeks of gestation who presented with a pinpoint lesion in the middle finger, which grew rapidly in the postnatal period. The lesion was successfully excised after recurrent episodes of spontaneous bleeding.

Keywords: Pyogenic Granuloma, Pregnancy, Granuloma Gravidarum, Capillary Hemangioma

Introduction

Pyogenic granulomas are benign lesions of skin and mucus membrane. It is commonly seen in the oral mucosa and occurs in 2% of pregnant women. Only two cases of non-oral pyogenic granuloma in pregnancy have been reported before. These were reported by Smulian et al in 1994.

Case History

A 24 year old primi at 36 weeks of gestation (EDC on 24 June 2013), noticed a black iscoloration on the inner aspect of the tip of middle finger. The lesion was asymptomatic with no associated pain or bleeding. There was no history of trauma. She was a known case of Polycystic Ovarian Syndrome, who conceived following ovulation induction, after three years of infertility. There was no history of gestational hypertension or gestational diabetes mellitus. She developed Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP) at 37 weeks. Induction of labour was done with PgE at 38 weeks of gestation as she had decreased foetal movements. She delivered a full term normal female baby of birth weight 3.00 kg on 10 July 2013. Immediate post natal period was uneventful.

One week after delivery, patient reported back with complaints of increase in size of the lesion on the middle finger. On examination, the lesion was 1 cm in size. She was reassured and sent home. Two days later she reported back with history of spontaneous painless bleeding from the lesion. There was no history of trauma. There were similar episodes of self-limiting bleeding 7 - 8 times in one week. As the lesion had increased in size to 1.5 cm with associated pain and blood stained discharge, decision was taken for surgical excision. Wide excision was done under local anaesthesia on 50th post natal day and the specimen was sent for histopathology. Sutures were removed on the 10th postop day. No evidence of recurrence till date.

Histopathology Report

Section showed hyper-keratotic skin with underlying dermis, showing proliferated capillary sized blood vessels. The rest of the stroma showed chronic inflammatory cells composed of lymphocytes and plasma cells. One lobule of proliferated capillaries with intervening stroma was noted. Diagnosis was consistent with capillary hemangioma.

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Figure 2. Low power view of skin. Hyperkeratotic skin with underlying dermis showing proliferated capillary sized blood vessels. Plasma cells and lymphocytes are also seen.

Figure 3. Low power view of a lobule of capillary haemangioma showing proliferated capillaries with intervening stroma.

Figure 4. High power view of the lobule showing thin walled blood vessels lined by endothelium. Red blood cells are seen inside.

Discussion

Two French surgeons Poncet and Dor were the first to describe pyogenic granuloma (1897). They termed the lesion “botryomycosis hominis”. Later this was given various terms including Pyogenic Granuloma, tumour of pregnancy, “eruptive haemangioma”, “granuloma gravidarum” and lobular capillary hemangioma.

Pyogenic granuloma is a misleading term as it is not a true granuloma. Granuloma is a collection of immune cells like macrophages. They are formed as part of an immune response to wall off substances that are perceived as foreign; which the immune system is unable to eliminate, including infectious organisms like bacteria and fungi, suture material and keratin. Tuberculous granuloma is a typical example.

Pyogenic granuloma is a capillary haemangioma of Lobular subtype. Hence it is more prone to bleeding.

The most common site involved are the gums, skin and nasal septum. But it has been reported from other sites as well.

Pyogenic granuloma (PG) is an exophytic growth of tissue which occurs due to constant irritation, external trauma or due to influence of hormones. It is predominantly seen in young females and girls. Clinically PG appears as a red to purple coloured lesion. It is either smooth or lobulated. Earlier lesions will be red as there are numerous blood vessels. It may be a few millimetres in size and can grow up to 2 to 3 cms. Few giant sized PG unrelated to pregnancy has also been reported. It may bleed spontaneously or with trauma. There is usually rapid growth.

In pregnancy it can occur in early trimesters and the incidence increases with advancing gestational age. In pregnancy the most common site is anterior nasal septum. Here the main clinical presentation will be recurrent nose bleed. In 75% of cases the presentation is in the oral gingiva, mainly in maxillary and mandibular region. Other predominant sites where PG occurs during pregnancy are the lips, tongue and cheek. Rarely it occurs in the conjunctival mucosa too. Apart from the constant irritation and trauma, poor oral hygiene is found to be a precipitating factor for oral lesions.

Microscopically this is a highly vascular granulation tissue with inflammatory changes. There will be fibrous tissue in the older lesion. Surface may show minimal ulceration.

Smulian et al in 1994 had described two lesions of PG in pregnancy which was non oral in location. One was in the inguinal region which was excised successfully. The second non oral lesion involved a finger; showed rapid growth and recurred after excision.

Treatment

Usually no treatment is required as it is a self-limiting condition when occurring related to pregnancy. Recurrent
inopportune bleeding episodes may necessitate treatment. The treatment offered is cauterization and excision. Usually it is a minor surgical procedure.\(^4\)

**Conclusion**

Pyogenic granuloma occurring during pregnancy is a self-limiting condition and intervention is required only when it becomes symptomatic. Oral lesions are common during pregnancy but non oral lesions are also reported. Only very few cases of non-oral lesions have been reported earlier. Rather than cosmetic appearance, it is the inopportune bleeding episodes that makes the patient seek medical help. In such cases surgery is the treatment of choice.

**End Note**

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