Granuloma Gravidarum- The Pregnancy Tumor of Gingiva

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Pregnancy tumor is a very common entity which develops usually in 2nd and 3rd trimester of pregnancy. The load of hormones which is induced during pregnancy causes changes in the mother body & the oral cavity. They usually grow on the gums and are called pregnancy tumors due to extreme inflammatory reaction to a local irritation such as food particles or plaque.

Most studies demonstrate a definite female predilection with a female to male ratio of 2:1. This is attributed to the vascular effect of female hormones that occur in women during puberty, pregnancy and menopause. Poncet and Dor in 1897 first described pyogenic granuloma.

Pyogenic granulomas appear on the gingiva in 75% of cases, more often in the maxillary than mandibular jaw. Anterior areas are more often affected than posterior areas. It can also be found on the lips, tongue, and inner cheek. It shows a tendency for haemorrhage either spontaneously or with slight trauma.

Poncet and Dor in 1897 first described pyogenic granuloma or Pregnancy tumor and they:-

- Occur in about 1% - 5% of the pregnant women due to increased angiogenesis caused by estrogen and progesterone coupled with gingival irritation due to food particles or plaque.
- They are also known as Granuloma Gravidarum granuloma of pregnancy, pregnancy epulides, Crocker and Hartzell's disease, teleangiectaticum granulomatosa & lobular capillary hemangioma.

What is a Pyogenic Granuloma

- Pyogenic granulomas are common skin growths that are small and usually reddish in color.
- They tend to bleed because they contain a very large number of blood vessels.
- These lobular capillary hemangiomas are benign (noncancerous) and can be safely removed through various method.

Definition:-

Granuloma gravidarum is a benign lesion of the oral mucosa which occurs during pregnancy on gums related to hormonally altered response of the oral mucous membranes to local irritants such as bacterial plaque on adjacent teeth.
Types of Pyogenic Granuloma

a. Lobular capillary hemangioma
b. Non lobular capillary hemangioma

Causes

Increased angiogenesis caused by estrogen and progesterone coupled with gingival irritation due to food particles or plaque

Clinical Presentation:

1. The appearance of pyogenic granuloma can be smooth or lobulated, usually a color ranging from red/pink to purple.
2. Younger lesions are more likely to be red because of the high number of blood vessels. Older lesions begin to change into a pink color.
3. Size ranges from a few millimeters to centimeters.
4. It can be painful, especially if located in an area of the body where it is constantly disturbed.
5. Pyogenic granulomas can grow rapidly and will often bleed profusely with little or no trauma.
6. Sometimes the granuloma "leaks" oil like substance causing the surface to be damp.

Diagnosis:

- Clinically with considerable accuracy, the lesion is often ulcerated due to trauma associated with eating or tooth brushing. Pyogenic granulomas can grow rapidly and will often bleed profusely with little or no trauma.
- Radiographic - Radiographs are advised to rule out changes suggestive of malignancy or to identify a foreign body.
- Histo pathological – Biopsy is a must to rule out more serious conditions. Pregnancy tumor presents loose granulation tissue rich in capillary vessels and proliferation of endothelial cells, typically accompanied by a mixture of infiltrated inflammatory cells.

Management of Pyogenic Granulomas during Pregnancy

1. There is usually no treatment if the pyogenic granuloma occurs during pregnancy since the lesion may heal spontaneously.
2. Surgical excision of a Pyogenic Granulomas (PG) lesion after delivery is the best treatment option since a majority of cases are symptomatic and show bleeding; nodules (71.9%) with soft consistency (62.3%) and a red surface (73.2%).

3. Simple excision is enough to prevent recurrence but the etiology and pathogenesis must be known to understand its nature.

4. The most effective way involves surgically removing the entire growth and using stitches to close the wound and apply a chemical, such as silver nitrate, to help in controlling the bleeding.

5. These growths can also be removed using laser surgery.

6. Conservative Surgical Excision and removal of causative irritants are the usual treatments the excision should extend down to the periosteum and the adjacent teeth should be thoroughly scaled to remove the source of continuing irritation.

7. The Nd:YAG (neodymium-doped yttrium aluminium garnet) is a crystal that is used as a laser medium. It lowers the risk of bleeding compared to other surgical techniques.

8. The flash lamp pulsed dye laser, cryosurgery, sodium tetradecyl sulfate sclerotherapy are used, especially for highly recurrent lesions.

9. Large Pyogenic Granulomas with a bigger growth will need scraping it off and lightly cauterize or burn it. Cauterizing helps to stop bleeding and reduce the risk of having its recurrence.

10. The management should be based on the individual condition and should range from supportive therapy as well as medication to accelerate fetal lung maturity or even termination of pregnancy to save the patient’s life.

DOs and DON’Ts about oral health during pregnancy by American Academy of Pediatrics

1. Oral Health Education – DO have consultations with your dentist before, during and after your pregnancy
3. Nutrition – DON’T eat junk during pregnancy, diet and nutrition during pregnancy will limit sugar intake which, in turn, will minimize plaque buildup.
4. Treat Tooth Decay – DO urgent dental work completed prior to becoming pregnant.
5. Transmission of Bacteria – DON’T share food and utensils, to avoid transmission of bacteria known to cause tooth decay.
6. Use of Chewing Gum – Chewing sugarless gum increases saliva increases the production of salivary enzymes that help equalize the Ph in the mouth and thus reduce cavity growth.
Frequent bleeding from the granuloma.
- Recurrence after being removed

**Prognosis**

Prognosis of pregnancy tumor is usually good, however recurrence may happen in 16% cases.

**Conclusion**

Careful oral hygiene, removal of dental plaque and use of soft tooth brushes during pregnancy are very important to avoid occurrence of a pregnancy tumor.

**References**