



## Pyogenic Granuloma - Case Series

### KEYWORDS

scalpel technique, depigmentation, physiological pigmentation.

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**ABSTRACT** *Background:* Pyogenic granuloma is a localized proliferation of granulation tissue or very vascular fibrous tissue. Majority of localized overgrowths of the gingiva are reactive rather than neoplastic in nature. These lesions can be identified as specific entities on the basis of their histopathological features and can be broadly divided into fibrous, vascular, and giant cell types. Knowledge about their frequency, presentation and potential for recurrence aids the clinician in correct diagnosis and management. This paper throws light on commonly encountered reactive lesions pyogenic granuloma and presents two case-reports.

*Methods:* Paper presents two female patients presenting with gingival swelling. Female pt age 29yrs had a swelling since 2nd trimester of pregnancy spontaneous in onset and was 2-3mm in diameter initially & has gradually increased in size. Swelling was persistent even after delivering a baby. Another female patient aged 28yrs with the chief complaint of swelling in relation to lower lingual anterior teeth region. Since both the lesion measured 10-15mm in width and size of the swelling the lesions were planned for excision biopsy.

*Results:* Histopathological examination of the 2 pts biopsy revealed stratified squamous epithelium covering the stroma having acute and chronic inflammatory cells densely distributed. Numerous endothelial lined blood vessels with proliferating endothelial cells are evident. Diffuse distribution of extravasated RBC's are seen, thus based on the clinical and histological features it was diagnosed as Pyogenic granuloma.

*Conclusion:* These data might be used as a guide for forming clinical impressions about oral lesions, detailed clinical history and patient examination with histological examination should be stressed before establishing definitive diagnosis and to rule out other rare lesions.

### Introduction: -

Pyogenic granuloma is a pedunculated hemorrhagic nodule that occurs most frequently on the gingiva and that has a strong tendency to recur after simple excision.<sup>1,2,3</sup> Identical lesions with the same histologic structure occur in association with the florid gingivitis and periodontitis that may complicate pregnancy.<sup>4</sup> Under these circumstances, the lesions are referred to as pregnancy epulis or pregnancy tumor or epulis gravidarum. Its reported frequency ranges from 0% to 9.6%.<sup>5</sup> But according to some authors it is seen in 3-5% of pregnancies.<sup>6</sup> It usually presents as a spherical or flattened pedunculated soft interdental tissue located in marginal and interdental papilla with a fiery red to deep blue colour and often covered with small fibrin spots.<sup>7</sup>

The lesion undergoes rapid growth initially but is rarely larger than 2 cm. Pregnancy granulomas bleed readily if disturbed and demonstrate a tendency to recur following incomplete removal. This lesion has a predilection for the maxilla, and in particular the anterior vestibular aspect.

Herein, we present two case reports of Pyogenic granuloma, where one case showed a recurrence within 2mth duration following surgical excision. Histological examinations of biopsies for ultrastructural view are provided.

### Case description: -

#### Case-1: -

Male patient aged about 35yrs reported to our private setup, with a chief complaint of swellin in relation to upper palatal aspect of 11, 12, 21& 22. Patient gives history of spontaneous eruption, which gradually increased in size,

with no symptoms of pain or associated discharge, the swelling measured about 1.5cm\*1cm smooth surfaces and borders, non tender on palpation. The lesion was excised under local anesthesia following scaling and root planning.

**Histological examination: -** H&E section showed stratified squamous epithelium covering the stroma having chronic inflammatory cell densely distributed. Numerous endothelial lined blood vessels with proliferating endothelial cells are evident fig-1, thus based on the clinical and histological features it was diagnosed as Pyogenic granuloma.

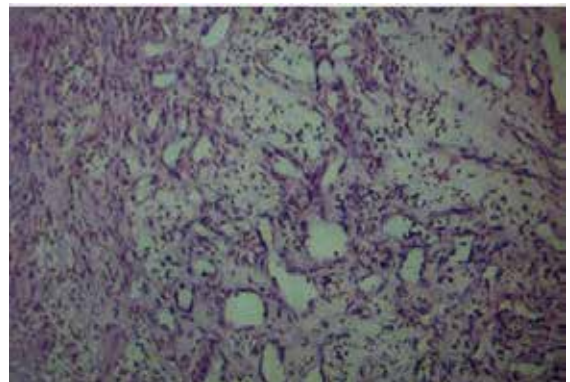


Fig-1

#### Case-2

Female patient aged 29yrs reported, with the chief complaint of swelling in relation to lower front teeth region. Patient noticed the swelling during her 2<sup>nd</sup> trimester of

pregnancy & was spontaneous in onset with 2-3mm in diameter initially has gradually increased in size. Swelling was persistent even after delivering a baby with the slight decrease in the size.

On clinical examination, swelling measuring 15mm mesio-distally and 10mm superio-inferiorly, which is fiery red and erythematous in color present in relation to #20, #21& #22 which is ovoid in shape with smooth surface having hemorrhagic spots and certain areas of ulceration having rounded edges and pedunculated attachment (Fig-2). and Scaling was done and patient was recalled after a wk for surgical excision of the lesion. The lesion was excised under L.A by placing the incision from the base of the lesion with the part of the healthy tissue, and was send to biopsy.

**Histological examination:** - H&E section showed stratified squamous epithelium covering the stroma having acute and chronic inflammatory densely distributed. Engorged blood vessels lined with proliferating endothelial cells. Diffuse distribution of extravasations of RBCs were seen, thus based on the clinical and histological features it was diagnosed as Pyogenic granuloma.



Fig- 2

**Case-3: -**

Female aged 28yrs, reported with the chief complaint of swelling in relation to lower lingual anterior teeth region. The swelling was spontaneous in onset and has gradually increased on size. History of similar swelling 2mts back in the same site which was excised and was diagnosed as Pyogenic granuloma. **Fig-3** On examination, swelling present in relation to 41,42,32 & 31measuring 15mm mesiodistally and 10mm superioinferiorly with red & erythmatous in certain area and is ovoid in shape with smooth surface and pedunculated attachment. Scaling was done and patient was recalled after a wk for surgical excision of the lesion. The lesion was excised under L.A by placing the incision from the base of the lesion with the part of the healthy tissue, and was send to biopsy.

**Histological examination:** - H&E section showed stratified squamous epithelium covering the stroma having acute and chronic inflammatory densely distributed. Numerous endothelial lined blood vessels with proliferating endothelial cells are evident. Diffuse distribution of extravasated RBC's are seen, thus based on the clinical and histological features it was diagnosed as Pyogenic granuloma.



Fig- 3

**Discussion: -**

Epulis is the generic term used to designate all the gingival over growth which is tumor or tumor like masses "epulis" was first used by Virchoff in 1864 derives from the Greek words "epi"(over) and "oulon" (gums).<sup>8</sup>

Gingival enlargement can be defined as a pathology that is characterized by the overgrowth of the gingiva; it can be 1) Inflammatory, 2) Non- inflammatory or 3) Mixed.

The Pyogenic granuloma is a small, pedunculated, hemorrhagic nodule that occurs most frequently on the gingiva and has a strong tendency to recur following simple excision. The lesions occur in association with florid gingivitis and periodontitis that may complicate pregnancy and are referred to as pregnancy epulis or tumor.<sup>8</sup>

It is the exaggerated conditioned response to minor trauma; the exact nature of conditioning is not known. Commonest soft hemorrhagic lesion occurring on gingiva, occurs in the age group between 11to 40 yrs of age, 70% in women (Angelopoulos 1971), high recurrence rate of 15% . bartonella sp and human herpes virus 8 have been implicated in etiology of recurrent pyogenic granuloma (Janier 1999). It should be differentiated from pregnancy tumour- 3<sup>rd</sup> mth of pregnancy, gradually increases in size may regress after delivery.<sup>9</sup>

**Management: -**

The entire reactive lesion can be managed by removal of local irritating factors. Excision can be achieved by scalpel excision, electrical scalpel, laser excision using diode laser, CO2 laser, Erbium:YAG. CO2 laser better option for removal of gingival hyperplasia, combination of surgical scalpel with electrical scalpel recommended as better option than either of intra and peri-lesional injection Penicillin G- 1,000,000 IU- sclerosis and necrosis leading to detachment of lesion (El Wady et al 1998). Pyogenic granuloma can be treated by curettage, cryotherapy, electrical cauterization and chemical cauterization.<sup>10</sup>

**Conclusion**

Although these data might be used as a guide for forming clinical impressions about oral lesions, detailed clinical history and patient examination with histological examination should be stressed before establishing definitive diagnosis and to rule out other rare lesions.

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