

### Soft tissue tumors

#### FIBROMA (IRRITATION FIBROMA; TRAUMATIC FIBROMA; FOCAL FIBROUS HYPERPLASIA; FIBROUS NODULE)

The fibroma is the most common “tumor” of the oral cavity. However, it is doubtful that it represents a true neoplasm in most instances; rather, it is a reactive hyperplasia of fibrous connective tissue in response to local irritation or trauma.

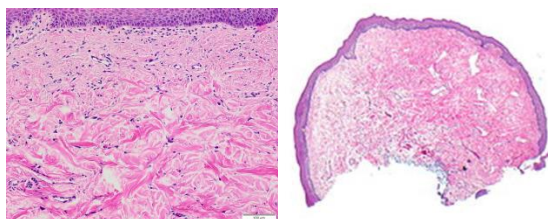
#### CLINICAL FEATURES

The most common location is the buccal mucosa along the bite line. The labial mucosa, tongue, and gingiva also are common sites. The lesion typically appears as a smooth-surfaced pink nodule that is similar in color to the surrounding mucosa. In some cases the surface may appear white as a result of hyperkeratosis from continued irritation. Most fibromas are sessile, or pedunculated. Most fibromas are 1.5 cm or less in diameter. The lesion usually produces no symptoms, unless secondary traumatic ulceration of the surface has occurred. Most common in the fourth to sixth decades of life.



#### HISTOPATHOLOGIC FEATURES

Microscopic examination of the irritation fibroma shows a nodular mass of fibrous connective tissue covered by stratified squamous epithelium. The lesion is not encapsulated; the fibrous tissue instead blends gradually into the surrounding connective tissues. The covering epithelium often demonstrates atrophy of the rete ridges because of the underlying fibrous mass. However, the surface may exhibit hyperkeratosis from secondary trauma. Scattered inflammation may be seen, most often beneath the epithelial surface. Usually this inflammation is chronic and consists mostly of lymphocytes and plasma cells.



### TREATMENT

The irritation fibroma is treated by conservative surgical excision; recurrence is extremely rare.

### GIANT CELL FIBROMA

The giant cell fibroma is a fibrous tumor with distinctive clinicopathologic features. Unlike the traumatic fibroma, it does not appear to be associated with chronic irritation. The giant cell fibroma represents approximately 2% to 5% of all oral fibrous proliferations submitted for biopsy.

### CLINICAL FEATURES

The giant cell fibroma is typically an asymptomatic sessile or pedunculated nodule, usually less than 1 cm in size. The surface of the mass often appears papillary.

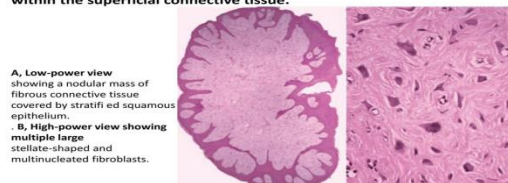
Compared with the common irritation fibroma, the lesion usually occurs at a younger age. In about 60% of cases, the lesion is diagnosed during the first 3 decades of life. Some studies have suggested a slight female predilection. Approximately 50% of all cases occur on the gingiva. The mandibular gingiva is affected twice as often as the maxillary gingiva. The tongue and palate also are common sites.



### HISTOPATHOLOGIC FEATURES

Microscopic examination of the giant cell fibroma reveals a mass of vascular fibrous connective tissue, which is usually loosely arranged. The hallmark is the presence of numerous large, stellate fibroblasts within the superficial connective tissue. These cells may contain several nuclei. Frequently, the surface of the lesion is pebbly. The covering epithelium often is thin and atrophic, although the rete ridges may appear narrow and elongated.

**Microscopic Examination**  
•Reveals a mass of vascular fibrous connective tissue, which is usually loosely arranged .  
•The hallmark is the presence of numerous large, stellate fibroblasts within the superficial connective tissue.



### TREATMENT

# ORAL PATHOLOGY

## lec 3

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The giant cell fibroma is treated by conservative surgical excision. Recurrence is rare.

### EPULIS FISSURATUM (INFLAMMATORY FIBROUS HYPERPLASIA; DENTURE

### INJURY TUMOR; DENTURE EPULIS)

The epulis fissuratum is a tumor like hyperplasia of fibrous connective tissue that develops in association with the flange of an ill-fitting complete or partial denture.

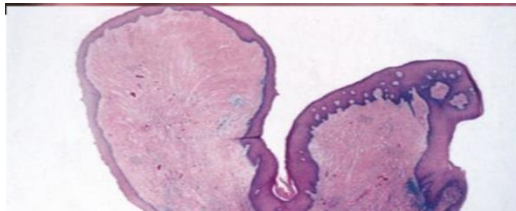
#### CLINICAL FEATURES

The epulis fissuratum typically appears as a single or multiple fold or folds of hyperplastic tissue in the alveolar vestibule. Most often, there are two folds of tissue, and the flange of the associated denture fits conveniently into the fissure between the folds. The redundant tissue is usually firm and fibrous, although some lesions appear erythematous and ulcerated, similar to the appearance of a pyogenic granuloma. The size of the lesion can vary from localized hyperplasia's less than 1 cm in size to massive lesions that involve most of the length of the vestibule.



#### HISTOPATHOLOGIC FEATURES

Microscopic examination of the epulis fissuratum reveals hyperplasia of the fibrous connective tissue. Often multiple folds and grooves occur where the denture impinges on the tissue. The overlying epithelium is frequently hyperparakeratotic and demonstrates irregular hyperplasia of the rete ridges. A variable chronic inflammatory infiltrate is present; sometimes, it may include eosinophils or show lymphoid follicles.



#### TREATMENT

surgical removal. The ill-fitting denture should be remade or relined to prevent a recurrence of the lesion.

### INFLAMMATORY PAPILLARY HYPERPLASIA (DENTURE PAPILLOMATOSIS)

Inflammatory papillary hyperplasia is a reactive tissue growth that usually, although not always, develops beneath a denture. Although the exact pathogenesis is unknown, the condition most often appears to be related to the following:

- An ill-fitting denture
- Poor denture hygiene
- Wearing the denture 24 hours a day

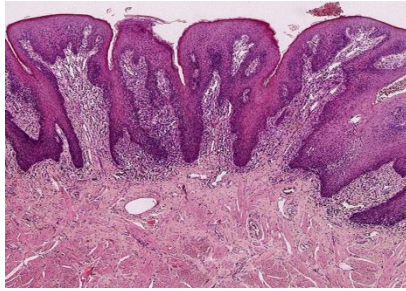
#### **CLINICAL FEATURES**

Inflammatory papillary hyperplasia usually occurs on the hard palate beneath a denture base. Early lesions may involve only the palatal vault, although advanced cases cover most of the palate. On rare occasions, the condition occurs on the palate of a patient without a denture, especially in people who habitually breathe through their mouth or have a high palatal vault. *Candida* associated palatal papillary hyperplasia also has been reported in dentate patients with human immunodeficiency virus (HIV) infection. Inflammatory papillary hyperplasia is usually asymptomatic. The mucosa is erythematous and has a pebbly or papillary surface. Many cases are associated with denture stomatitis.



#### **HISTOPATHOLOGIC FEATURES**

The mucosa in inflammatory papillary hyperplasia exhibits numerous papillary growths on the surface that are covered by hyperplastic, stratified squamous epithelium. In advanced cases, this hyperplasia is pseudoepitheliomatous in appearance, and the pathologist should not mistake it for carcinoma. The connective tissue can vary from loose and edematous to densely collagenized. A chronic inflammatory cell infiltrate is usually seen, which consists of lymphocytes and plasma cells.



### **TREATMENT**

➡ For very early lesions : removal of the denture may allow the erythema and edema to subside, and the tissues may resume a more normal appearance.

➡ For more advanced and collagenized lesions, excise the hyperplastic tissue before fabricating a new denture.

### **PYOGENIC GRANULOMA**

The pyogenic granuloma is a common tumor like growth of the oral cavity that traditionally has been considered to be nonneoplastic in nature.\* Although it was originally thought to be caused by pyogenic organisms, it is now believed to be unrelated to infection. Instead, the pyogenic granuloma is thought to represent an exuberant tissue response to local irritation or trauma.

### **CLINICAL FEATURES**

The pyogenic granuloma is a smooth or lobulated mass that is usually pedunculated, although some lesions are sessile. The surface is characteristically ulcerated and ranges from pink to red to purple, depending on the age of the lesion. They vary from small growths only a few millimeters in size to larger lesions that may measure several centimeters in diameter. Typically, the mass is painless, although it often bleeds easily because of its extreme vascularity. Pyogenic granulomas may exhibit rapid growth, which may create alarm for both the patient and the clinician, who may fear that the lesion might be malignant.

Oral pyogenic granulomas show a striking predilection for the gingiva, which accounts for 75% of all cases. The lips, tongue, and buccal mucosa are the next most common sites.

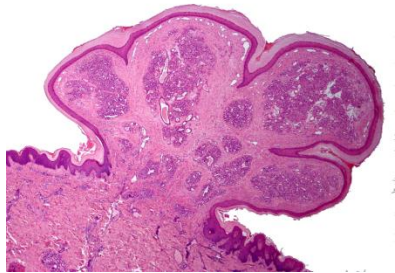
Although the pyogenic granuloma can develop at any age, it is most common in children and young adults.



Pyogenic granulomas of the gingiva frequently develop in pregnant women, so much so that the terms *pregnancy tumor* or *granuloma gravidarum* often are used. Such lesions may begin to develop during the first trimester, and their incidence increases up through the seventh month of pregnancy. After pregnancy and the return of normal hormone levels, some of these pyogenic granulomas resolve without treatment or undergo fibrous maturation and resemble a fibroma.

#### **HISTOPATHOLOGIC FEATURES**

Microscopic examination of pyogenic granulomas shows a highly vascular proliferation that resembles granulation tissue. Numerous small and larger endothelium-lined channels are formed that are engorged with red blood cells. These vessels sometimes are organized in lobular aggregates, and some pathologists require this lobular arrangement for the diagnosis (*lobular capillary hemangioma*). The surface is usually ulcerated. A mixed inflammatory cell infiltrate of neutrophils, plasma cells, and lymphocytes is evident.



#### **TREATMENT**

The treatment of patients with pyogenic granuloma consists of conservative surgical excision, which is usually curative. For lesions that develop during pregnancy, usually treatment should be deferred unless significant functional or aesthetic problems develop. The recurrence rate is higher for pyogenic granulomas removed during pregnancy.

#### **PERIPHERAL GIANT CELL GRANULOMA (GIANT CELL EPULIS)**

The peripheral giant cell granuloma is a relatively common tumor like growth of the oral cavity. It probably does not represent a true neoplasm but rather is a reactive lesion caused by local irritation or trauma.

#### **CLINICAL AND RADIOGRAPHIC FEATURES**

- Occurs exclusively on the gingiva or edentulous alveolar ridge, presenting as a red or red-blue nodular mass.



# ORAL PATHOLOGY

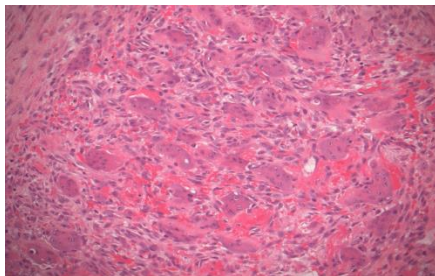
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- Most lesions are smaller than 2 cm in diameter, although larger ones are seen occasionally.
- Sessile or pedunculated.
- Similar to the more common pyogenic granuloma of the gingiva.
- Develop at almost any age.
- The mean age in several large series ranges from 31 to 41 years.
- Approximately 60% of cases occur in females.
- Although the peripheral giant cell granuloma develops within soft tissue, “cupping” resorption of the underlying alveolar bone sometimes is seen.

### HISTOPATHOLOGIC FEATURES

Shows a proliferation of multinucleated giant cells within a background of plump ovoid and spindle-shaped mesenchymal cells. The giant cells may contain only a few nuclei or up to several dozen. Abundant hemorrhage is characteristically found throughout the mass, which often results in deposits of hemosiderin pigment, especially at the periphery of the lesion. The overlying mucosal surface is ulcerated in about 50% of cases. A zone of dense fibrous connective tissue usually separates the giant cell proliferation from the mucosal surface. Adjacent acute and chronic inflammatory cells are frequently present.



### TREATMENT

The treatment of the peripheral giant cell granuloma consists of local surgical excision down to the underlying bone.

### PERIPHERAL OSSIFYING FIBROMA (OSSIFYING FIBROID EPULIS; PERIPHERAL FIBROMA WITH CALCIFICATION; CALCIFYING FIBROBLASTIC GRANULOMA)

The peripheral ossifying fibroma is a relatively common gingival growth that is considered to be reactive rather than neoplastic in nature. Because of their clinical and histopathologic similarities, researchers believe that some peripheral ossifying fibromas develop initially as pyogenic granulomas that undergo fibrous maturation and subsequent calcification.

### CLINICAL FEATURES

# ORAL PATHOLOGY

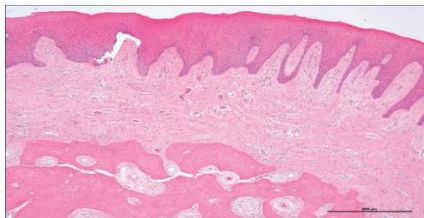
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- Occurs exclusively on the gingiva.
- Appears as a nodular mass, either pedunculated or sessile, that usually emanates from the interdental papilla .
- The color ranges from red to pink.
- Most lesions are less than 2 cm in size.
- It is predominantly a lesion of teenagers and young adults, with peak prevalence between the ages of 10 and 19.
- There is a slight predilection for the maxillary arch, and more than 50% of all cases occur in the incisor-cuspid region.

### HISTOPATHOLOGIC FEATURES

A fibrous proliferation associated with the formation of a mineralized product . The type of mineralized component is variable and may consist of bone, cementum-like material, or dystrophic calcifications. Usually, the bone is woven and trabecular in type, although older lesions may demonstrate mature lamellar bone. Dystrophic calcifications are characterized by multiple granules, tiny globules, or large, irregular masses of basophilic mineralized material. Such dystrophic calcifications are more common in early, ulcerated lesions; older, nonulcerated examples are more likely to demonstrate well-formed bone or cementum.



### TREATMENT

local surgical excision down to periosteum because recurrence is more likely if the base of the lesion is allowed to remain. In addition, the adjacent teeth should be thoroughly scaled to eliminate any possible irritants.

Although excision is usually curative, a recurrence rate of 8% to 16% has been reported.