Connective Tissue Hyperplasia (Tumor-LikeLesions)

- It is the most common oral lesion occur inside the oral cavity in response to chronic inflammation or chronic irritation.
- Most C.T. hyperplasia represent fibrous tissue proliferation & exuberant production of granulation tissue in chronic inflammatory reactions.
- C.T. hyperplasia can originate anywhere in the oral cavity, but those arising from the gingiva usually known as epulis.
- The common localized C.T. hyperplasia of oral mucosa are:

1- Epulis: a- fibrous epulis , b- P.G.C.G (giant cell epulis),
c- vascular epulis (pyogenic granuloma, pregnancy epulis)

2- Pyogenic granuloma (not in the gum) 3- Fibroepithelial polyp

4- Denture irritation hyperplasia 5- Papillary hyperplasia of the palate

- ***Generally, hyperplasia of C.T. occurs as aresult of :***

1- Reaction to injury & it is called “reactive hyperplasia”

2- As a result of a benign neoplastic transformation of fibroblast

3- Malignant transformation of fibroblast

- **The most common causes of reactive hyperplasia are:**

1- lip biting 2- cheek biting 3- ill fitting denture
4- sharp edge of crown or bridge 5- plaque & calculus.

The stimulation of C.T. by these factors lead to stimulation of C.T. cells (fibroblast, endothelial – etc)
This will lead to a production of granulation tissue then mass of C.T. in the position of irritation.

These lesions are called **tumor- like lesion**, because:
In general the term tumor refers to swelling, & because these lesions have clinical appearance of tumor but without cellular neoplasia, **only hyperplasia**, therefore the name is applied.

((Hyperplastic reaction to chronic irritation))

Neoplasia: mean proliferation toward either benign or malignant according to the type of cytological changes.

Hyperplasia: mean just proliferation of the cell (increase in the number of the cell) without cytological abnormality

1-Epulis

Growth confined to gingiva only

A- Fibrous epulis :

- It is hyperplasia of fibrous C.T. in response to chronic irritation in which there will be extensive production of mature bundle of collagen fibers resembling scar tissue.

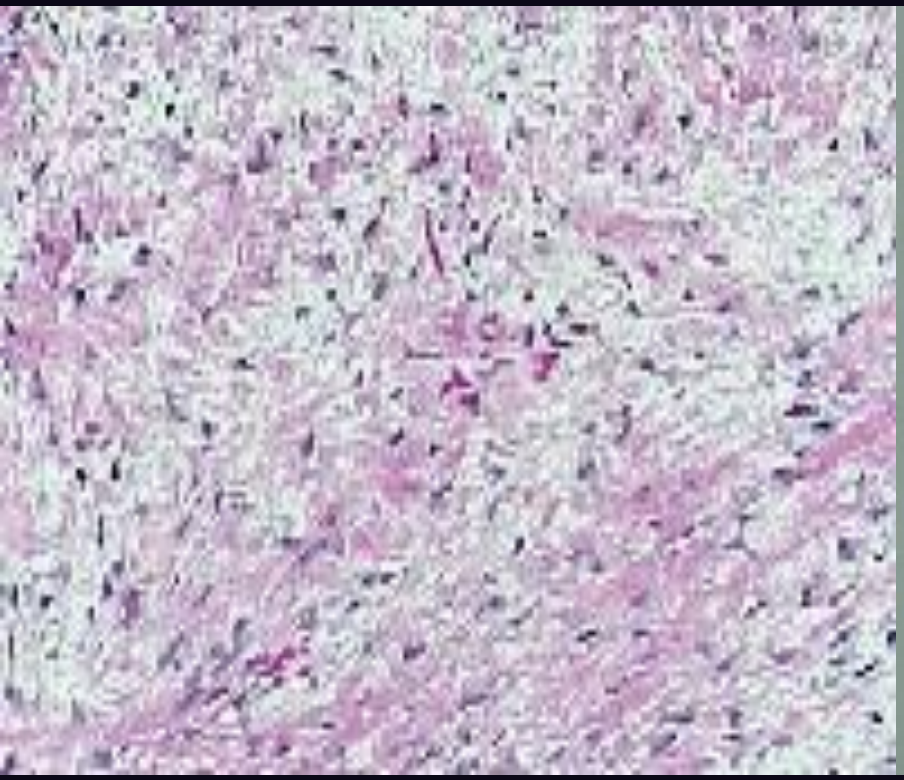
Clinically:

- Nodular swelling which is either pedunculated or sessile. The sessile one is firmly attached while pedunculated one is movable.
- Firm in consistency.
- Smooth surface with normal color (pinkish), but sometimes if it is exposed to injury or any irritation, it may ulcerated & covered by yellowish fibrinous exudates.

Histopathology:

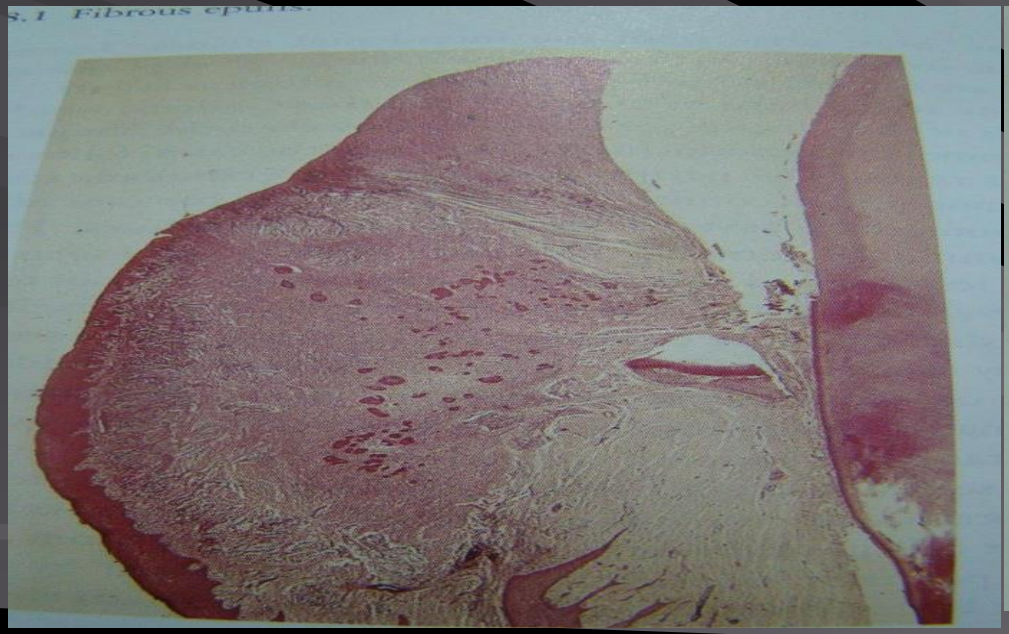
- **1-Epithelium:-** stratified squamous epith, either normal or hyperkeratinized or ulcerated. when there is ulcer we will have chronic inflammatory cells beneath the ulcer.

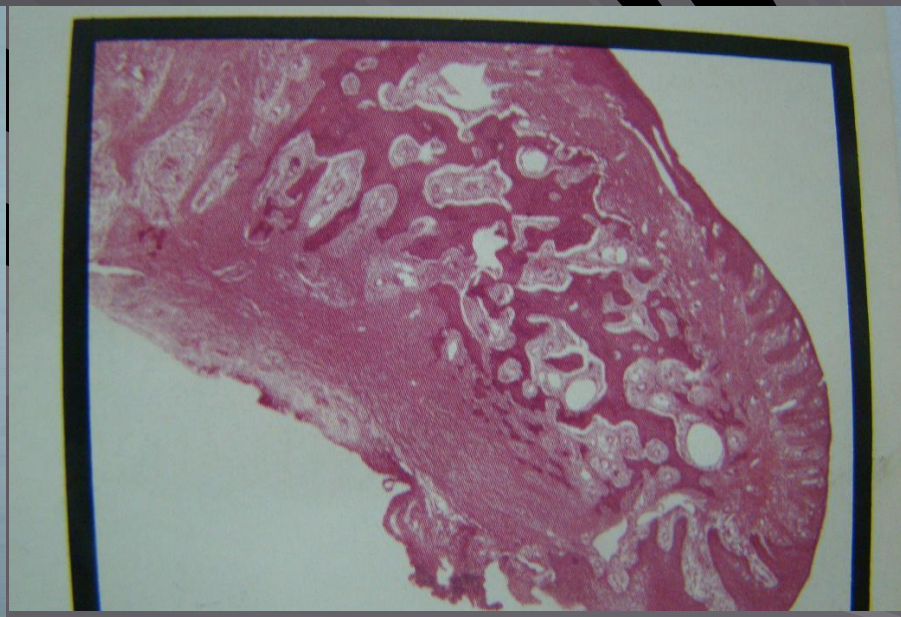
- **2- C.T: -**mass of richly cellular fibroblastic granulation tissue with interlacing bundles of mature collagen fibers. There is a variable numbers of chronic inflammatory cells infiltration, mainly plasma cells.



3- Sometimes we see a morphous deposits of calcified masses either trabeculae of metaplastic bone or cementoid & this is due to stimulation of undifferentiated fibroblast or cementoblast.

In such case the lesion give the histological appearance of ossifying fibroma which is intra - bony lesion, but this is not the case,so it is called Peripheral ossifying fibroma or Peripheral Cementifying fibroma





Treatment:

1- Remove the cause, the lesion will regress by itself.
2- If not, surgical removal required.

B- Vascular epulis: Pyogenic granuloma & Pegnancy tumor

- **These two lesions are identical lesions both clinically & histopathologically, but the pregnancy tumor is a pyogenic granuloma occur in pregnant women, otherwise it is pyogenic granuloma.**

- **Pyogenic granuloma:-**

  Fast growing reaction proliferation of endothelial cells, commonly on gingiva, in in response to irritation.

  (Reactive growth of fibro-vascular or granulation tissue with extensive endothelial proliferation)

Clinically:

- Mainly occur in the area of interdental papillae.
- Soft in consistency.
- Fiery red to purple swelling, which are extensively ulcerated.
- Hemorrhage may occur spontaneously or on minor trauma.

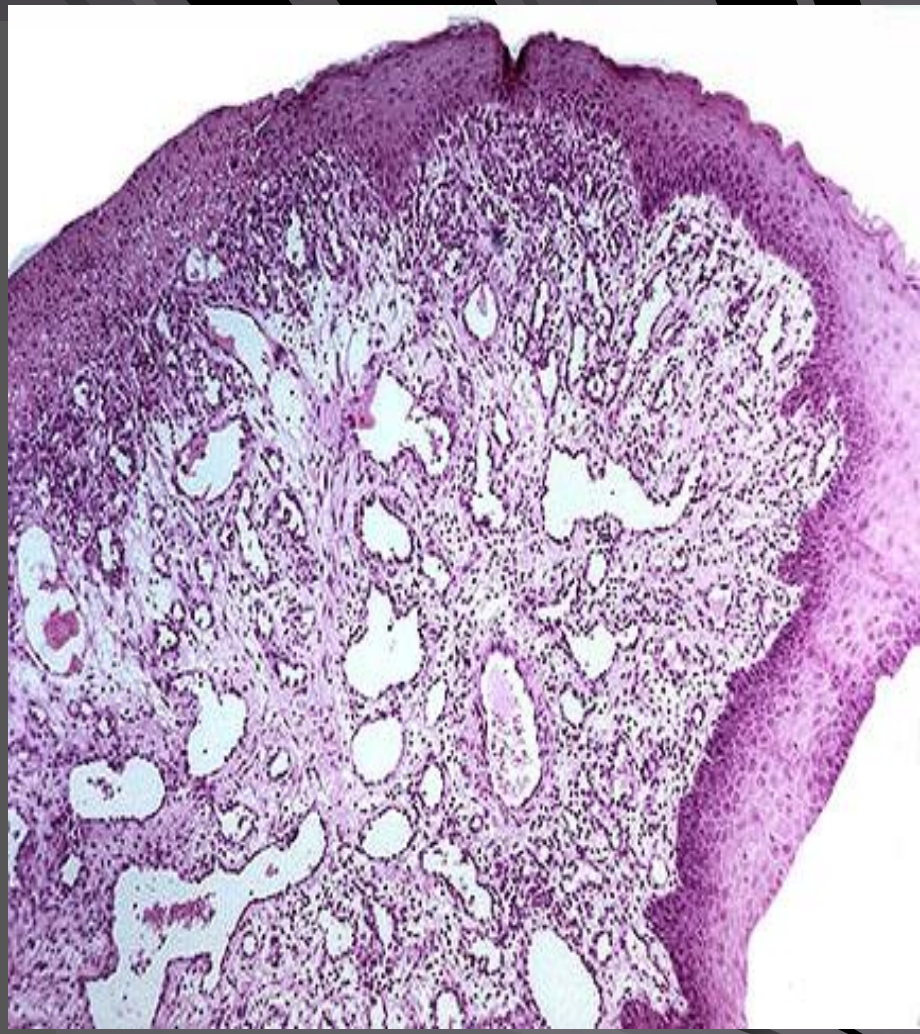
Histopathology:

- 1- Epithelium: same as fibrous epulis.

- 2- C.T.: composed of granulation tissue characterized by highly vascular proliferation, which consists of numerous small vessels & large, dilated, thin-walled vascular spaces.

This vascular tissue is supported by a delicate cellular fibrous stroma.

Inflammatory cells infiltration is variable but prominent beneath area of ulceration.



C- Peripheral giant cell granuloma (Giant cell epulis)

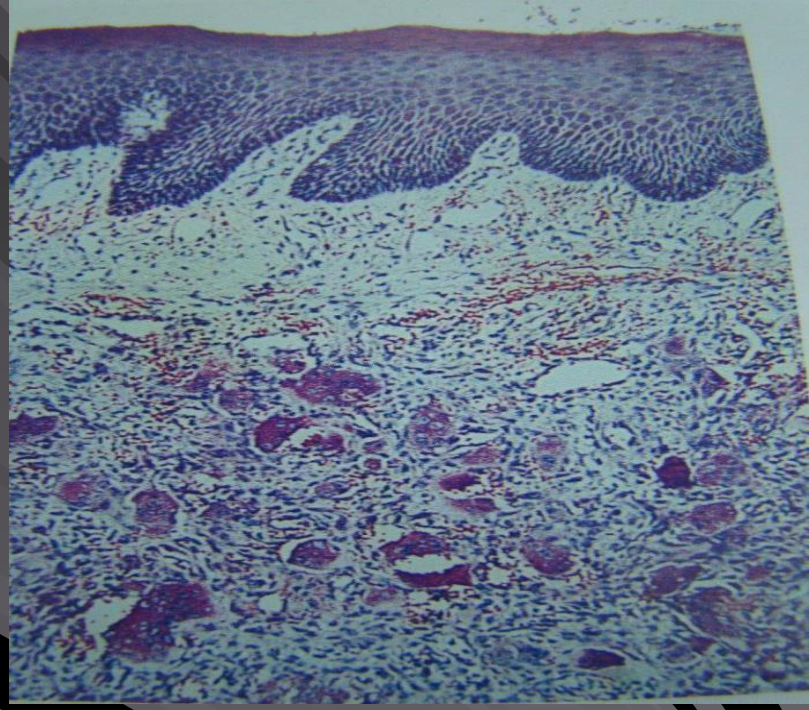
- Common growth of the oral cavity
- Extra-osseous nodule, represent hyperplastic reaction of gingival C.T composed of proliferation of mononuclear (histiocyte) & endothelial cells & multinucleated giant cells, occurs in gingiva, mostly in area anterior to molars. May occur in edentulous patient on the alveolar ridge.

Clinically

- Sessile or peduncleated swelling of variable size, dark-red in color, commonly ulcerated.
- It represent a soft tissue counterpart of central giant cell granuloma.
- Sometime the lesion causing erosion of interdental bone.

Histopathology

- Proliferation of multinucleated giant cells with a back ground of ovoid & spindle-shaped mesenchymal cells in a fibrous C.T stroma.
- Abundant hemorrhage is characteristically seen throughout the mass with hemosidrin deposit at the periphery of the lesion.
- Surface ulceration may be seen with chronic inflammatory cells infiltrate.
- Sometime , reactive new bone formation may be seen.



Treatment

Surgical excision down to the underlying bone.

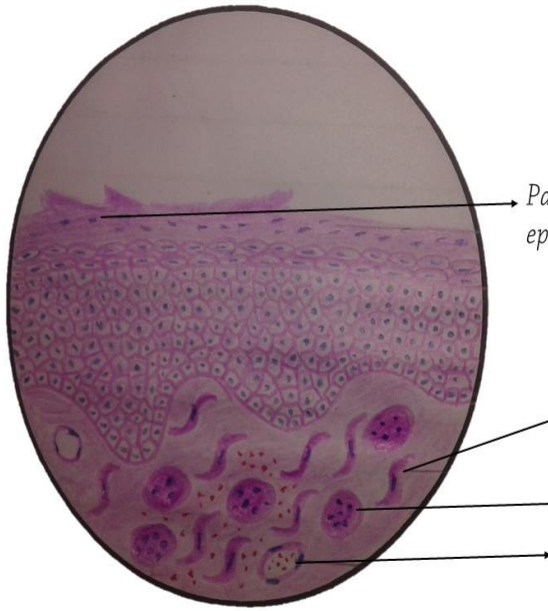


Fig: Peripheral Giant Cell Granuloma

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2- Pyogenic granuloma (not in gingiva)

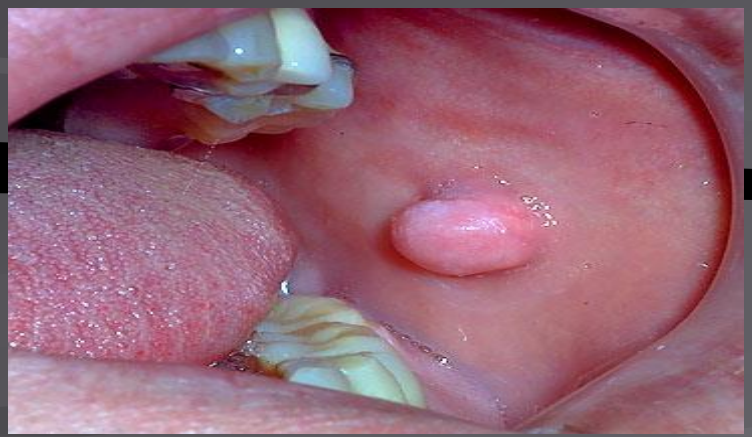
- Although the majority of pyogenic granuloma in the oral cavity arise on the gingiva, the lesion can occur at other sites, for e.g. the tongue, & buccal mucosa, as a result of trauma.
- The clinical & histology are the same as for the gingival one.

3- Fibro-epithelial polyp

- When the fibrous epulis occur in area rather than the gingiva is called fibroepithelial polyp. It arise mainly in the checks along the occlusal line, lips, & tongue.
- Minor trauma is thought to be an important initiating factor.

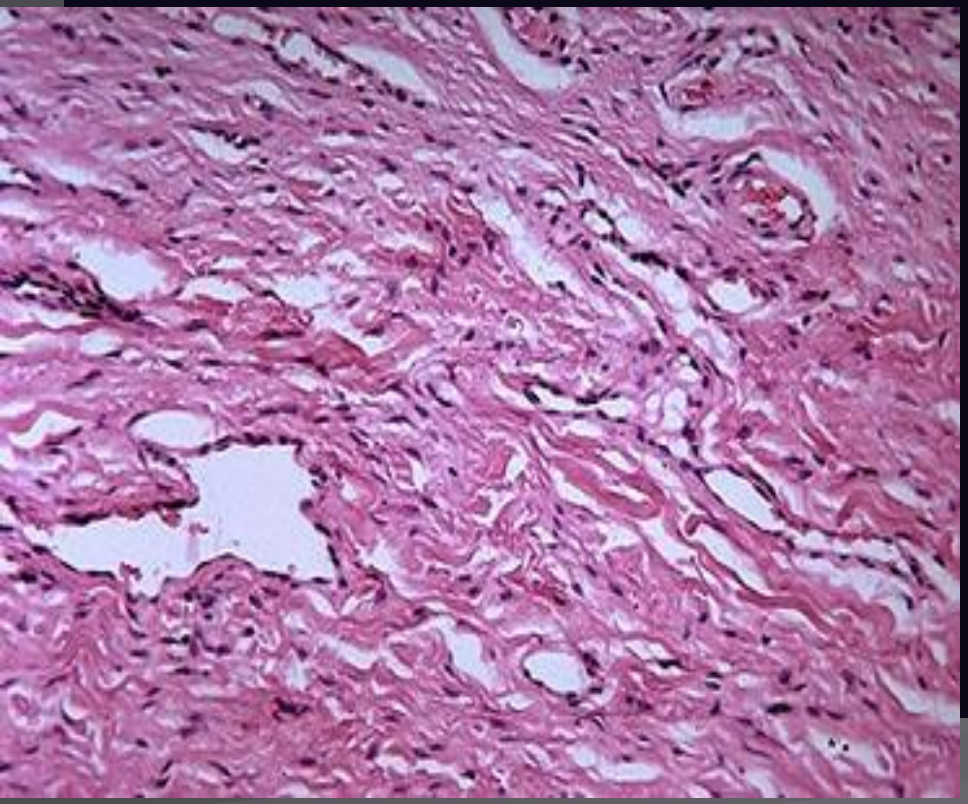
Clinically:

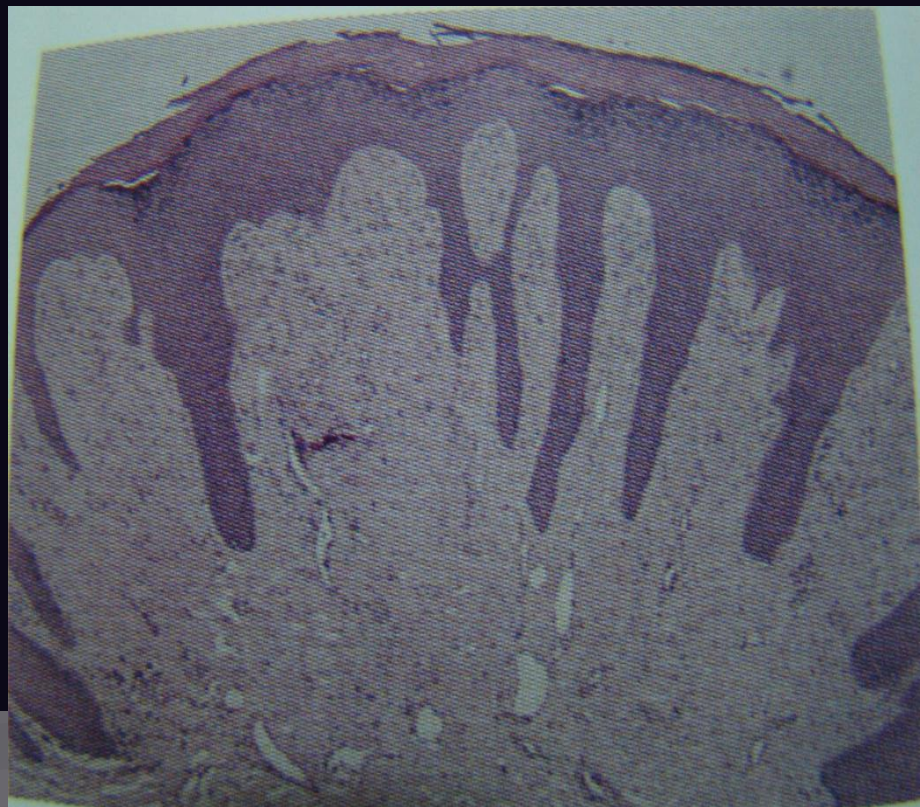
- Appear as a firm, pink, painless, sessile or pedunculated, polypoid swelling with varying size from a few mm to a cm or more.
- The surface is whitish due to mild frictional keratotis.
- When the lesion occurs in the palate under a denture it become leaf-like & referred to as a **leaf fibroma.**



Histopathology:

- 1- Epithelium:- either normal or hyperkeratinized due to frictional irritation.
- 2- C.T :- show dense, relatively avascular & acellular or has little scanty fibroblast, composed of bundles of collagen fibers.
- 3- No inflammatory cell infiltration unless there is secondary infection.





4- Denture irritation hyperplasia

Epulis fissuratum, Denture epulis

- Lesion related to the periphery (flange) of an ill-fitting denture, may be single or multiple with one or several broad base, leaf-like of tissue embracing the over-extended flange of denture.
- They usually arise in the vestibular & lingual sulci, but can involve the inner surfaces of the lips, check, & the palate along the posterior edge of an upper denture.
- Mostly occur in relation to the lower denture than upper.

Clinically:

- The lesion is firm in consistency, appear as nodules or polypoid projection, in area where the denture flanges impinges on the tissue at the base.
- Not inflammed, but sometimes may be ulcerated at the area into which the flange of the denture fits.

Histopathology:

The epithelium may show hyperkeratosis & sometime ulceration

The lesion is comprised of relatively avascular and acellular fibrous tissue that sometimes shows inflammatory cells beneath the ulcerative area.

Treatment:

Surgical removal with relining , or remading of the ill-fitting denture ,to prevent recurrence.

5-Papillary hyperplasia of the palate - Denture papillomatosis-

- The etiology is not fully understood, but minor trauma relate to rocking & rotation of ill-fitting denture, with poor denture hygiene are most factors.
- The patient may give a history of sleeping with dentures, & often there is a chronic candidasis (attributing factor).

Clinically:

- Appears as numerous, small, tightly packed papillary projections over part or all of the denture bearing area which give the hard palate a pebbled appearance.

- The mucosa is often red, edematous , particularly if there is a candidal infection.

Histopathology:

- 1- Epithelium: shows numerous papillary projections, the stratified sq. epith is hyperplastic & in some cases the unwary pathologist may mistake it as a sq.c.c. This appearance referred to as **Pseudo epitheliomatous hyperplasia** & is characterized by irregular proliferation & branching of the rete ridges which extend for considerable distances into the underlying C.T., suggestion invasion keratin pearl, but there are no atypical cytological features.
- 2- C.T.: is chronically inflamed granulation & fibrous tissue.

Treatment

Surgical excision before making a new denture.