



Pulp necrosis

result due to cutoff of apical blood vessels as a result of blow or trauma without caries (coagulative) or due to a sequel of caries (liquefactive necrosis)

clinically

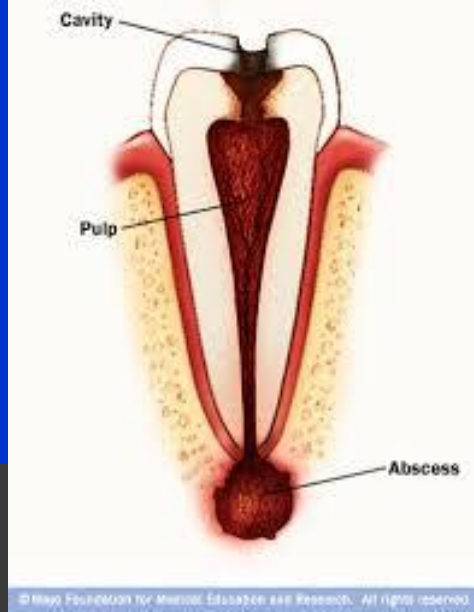
- 1-symptomless or slight pain, specially in multirouted teeth
- 2-discoloration of the tooth when the product of necrotic pulp pass into the dentinal tubule giving the tooth a greenish – black color
- 3-bad odors smelled

Age change in the pulp

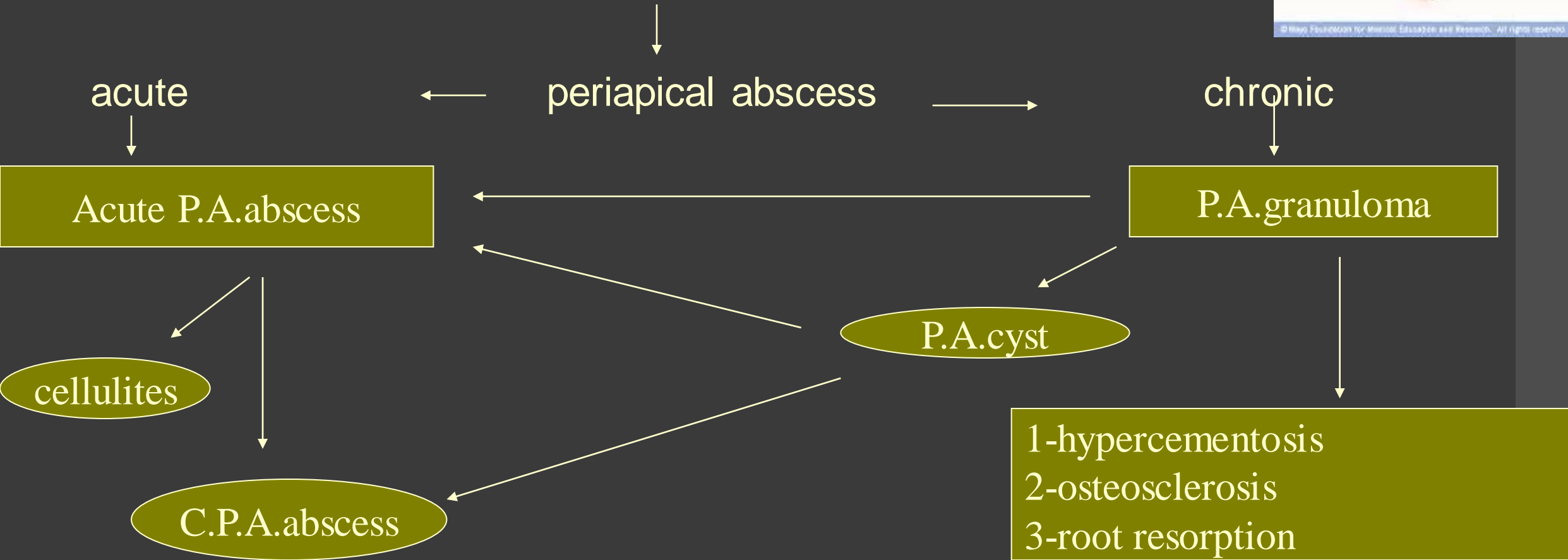
- 1-the size of pulp reduced
 - 2-decrease in vascularity
 - 3-reduction in cellularity& increase in collagen fibers
- *these changes may allow change in the response of the pulp tissue to injury & impair the healing potential

PERIAPICAL DISEASES

mean extension of pulp inflam. beyond the tooth root apex
the possible changes that may occur around non vital tooth apex are



Bacterial cause--- non vital tooth ---- non bacterial cause



This interrelation ship depends on :

- 1- number & virulence of the microorganism that invade the area**
- 2- types & severity of the irritation (mechanical or chemical)**
- 3- host defense**
- 4- duration of irritation**

Etiology:

- 1-Pulp infection due to caries (bacterial)**
- 2-Trauma, either due to blow on the tooth or due to occlusal trauma which result from a high restoration or less frequently associated with bruxism, or from orthodontic treatment**
- 3-Endodontic treatment, mechanical instrumentation through the root canal treatment, as well as chemical irritation from root filling materials**

Periapical abscess: acute or chronic suppurative process in the periapical area . It can develop directly as acute or chronic depending on the host defense some time the chronic one can transformed to acute one if invaded by more virulence microorganism

■ **Clinically:**

- **1-sever pain in acute, & milder in chronic**
- **2-pain is increase on percussion**
- **3-extrusion of the tooth from its socket**
- **4-the tooth dose not respond to hot & cold stimulation .**
- **5-fever with regional lymphadenitis.**

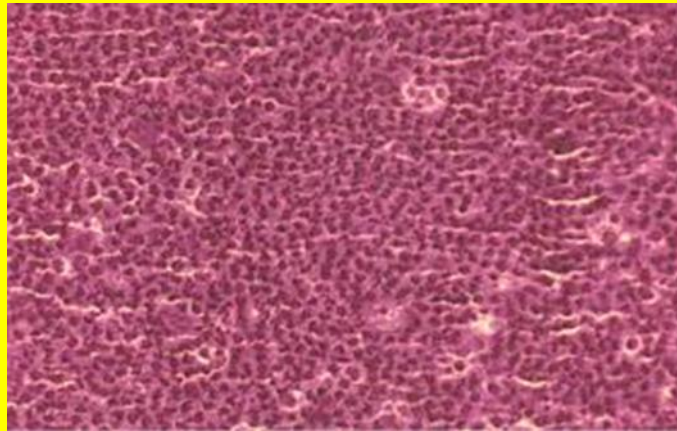
Radiographic appearance

- In acute abscess ,may be no change but sometimes only slight widening of PdL at the root apex seen.
- In chronic one,clearly defined radiolucency around the root observed



Histopathology

- Vascular dilatation of the PdL & adjacent bone marrow.
- The abscess consists of a sea of PML with inflammatory exudate ,cellular debris ,necrotic tissue &bacterial colonies



Periapical Granuloma (P.A.G): it's the most common lesion in dental clinic and as a sequel of pulpitis

it represent long standing inflammation in the bone at the root apex

is mass of granulation tissue formed due to the response of mild & chronic inflammation

■ Clinically:

- 1-may be symptomless, unless invaded by virulent m.o. & cause acute inflammation
- 2-sensetive to percussion, due to edema & inflammation in PdL
- 3-tooth slightly elongated in its socket.
- 4-non vital tooth, due to pulp necrosis



Radiographically:

- **Appear as oval or round radiolucency with well demarcation**
- **When undergo acute exacerbation will have a less distinct line**
- **Sometimes in a long standing P.A.G. finding such as hypercementosis or resorption**



Histopathology: show mass of granulation tissue

