



DISEASES OF BONE

**Dept.of Oral Pathology
& Microbiology**




Learning Objectives


At the end of the lecture student should be able to describe

- Clinical features, oral manifestations, radiographic features, histopathological features, & surgical management of Periapical Cemento-osseous Dysplasias, Focal Cemento-osseous Dysplasias, & Florid Cemento-osseous Dysplasias

PERI APICAL CEMENTO OSSEOUS DYSPLASIA.

- The definition of periapical cemental dysplasia in WHO classification “*Nonneoplastic lesion affecting the periapical tissues of one or more teeth,*” implies the inclusion of this entity occurring in both anterior and posterior apical areas of jaws.

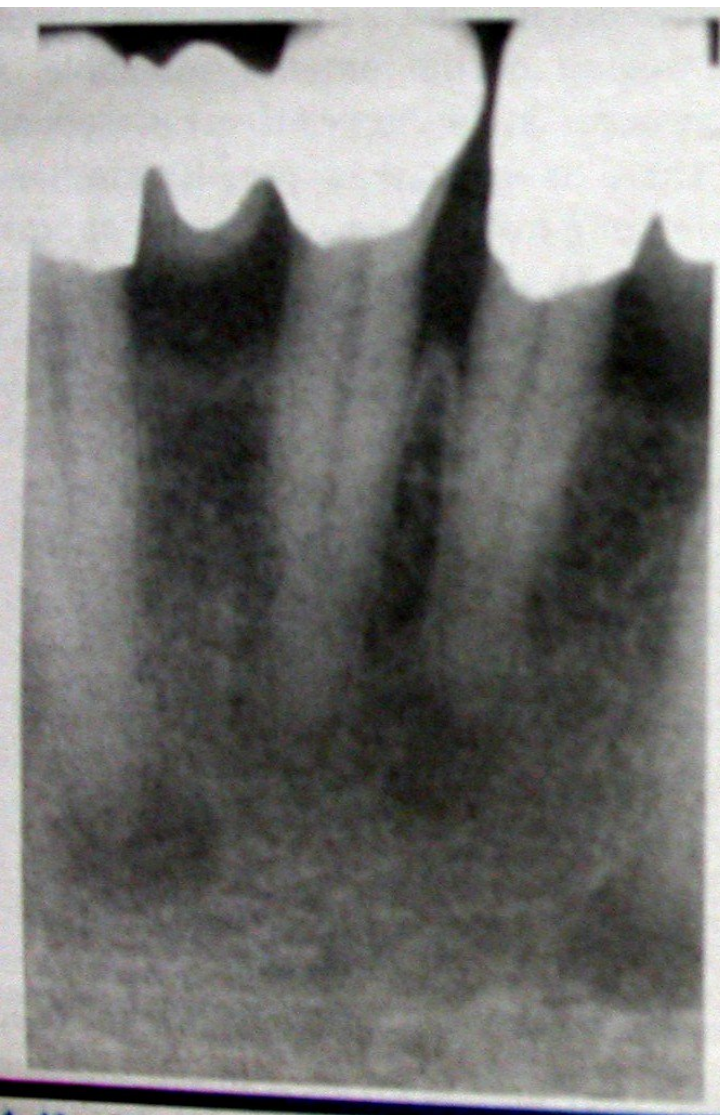
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- PCOD is a reasonably well-defined clinical-radiologic entity.
 - Predominantly involving the apical areas of vital mandibular incisors.
 - Striking predilection for female and Black patients.

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- Most patients are over 30 years of age and seldom the lesion is seen in patients younger than 20 years.
 - Invariably an asymptomatic lesion
 - Discovered on routine radiographic examination.





■ RADIOGRAPHIC FEATURES:

1. Well circumscribed
2. Mixed radiolucent or radio – opaque
3. Involves apices of one or more teeth
4. Individual lesions are seldom more than 1 cm in diameter and most are less than 0.5 cm.





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- Serial radiographic studies have shown that the lesions are initially *circumscribed and radiolucent*, over the course of several years show increasing degrees of *calcification*.

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- Management: there is general agreement that PCOD does not require treatment.
 - A biopsy may be performed in less typical clinical – radiologic situation.



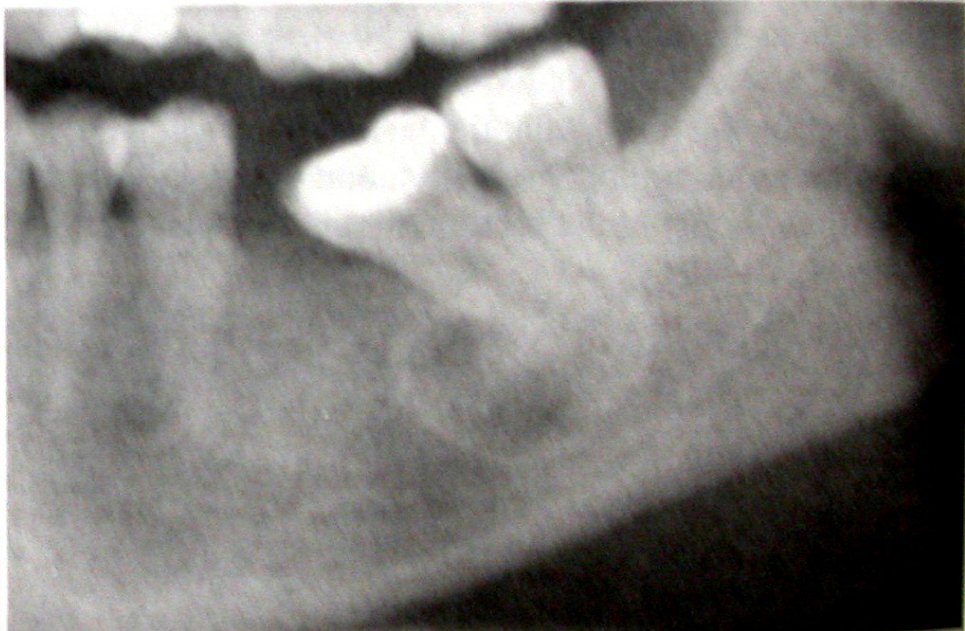
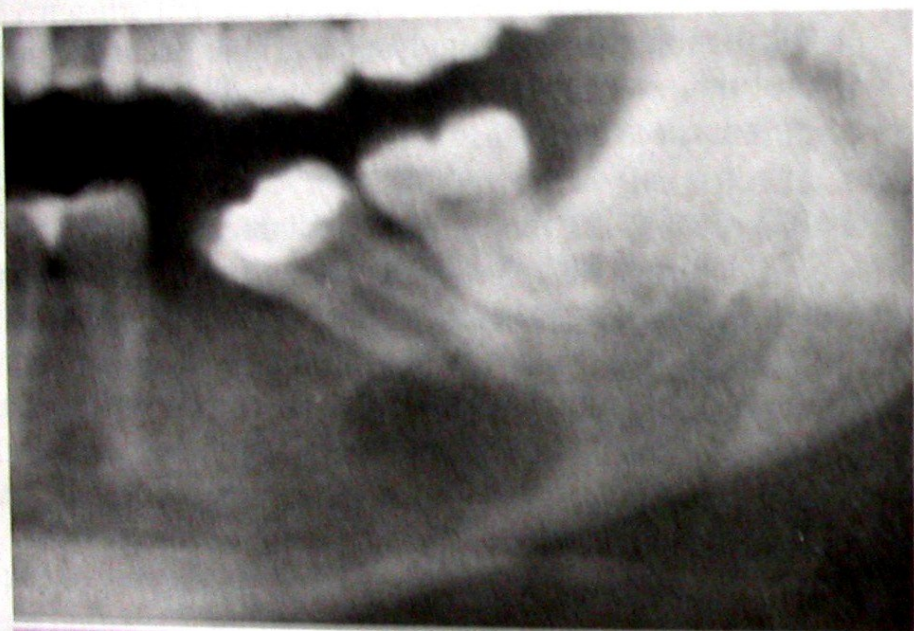
FOCAL CEMENTO–OSSEOUS DYSPLASIA

- Almost invariably an asymptomatic lesion
- There is no cortical expansion in most instances.
- Lesions are solitary.



RADIOGRAPHIC FEATURES:


1. Well circumscribed, may have radio opaque edge.
2. May have a faint grainy texture.
3. Mixed radio opaque/ radiolucent appearance, presence of one or more sclerotic masses.
4. Located in the tooth bearing areas and may reach up to 2 cm in size.






■ **DIFFERENTIAL DIAGNOSIS:**

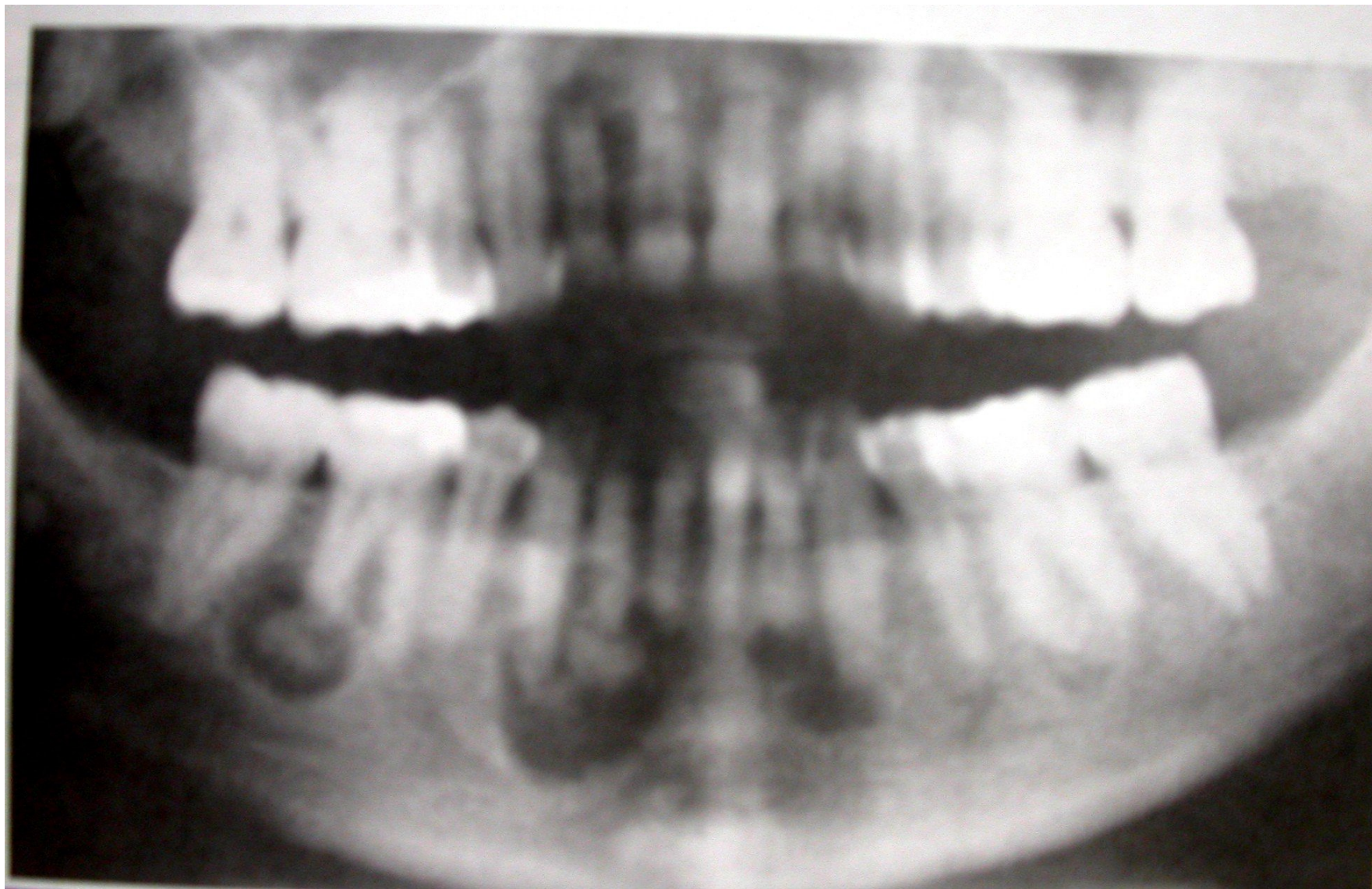
- Central cemento–ossifying fibroma.

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- An absolute key in differentiation is the gross appearance during surgery:
 - No capsule, continuous with the medullary bone and cortex.
 - Gritty, haemorrhagic tissue that fragments easily.

FLORID CEMENTO – OSSEOUS DYSPLASIA.

- Melrose: (1976) Florid osseous dysplasia.
- Prior to this FLCOD was reported as *gigantiform cementoma, chronic sclerosing osteomyelitis, sclerotic cemental masses, and multiple endostosis.*

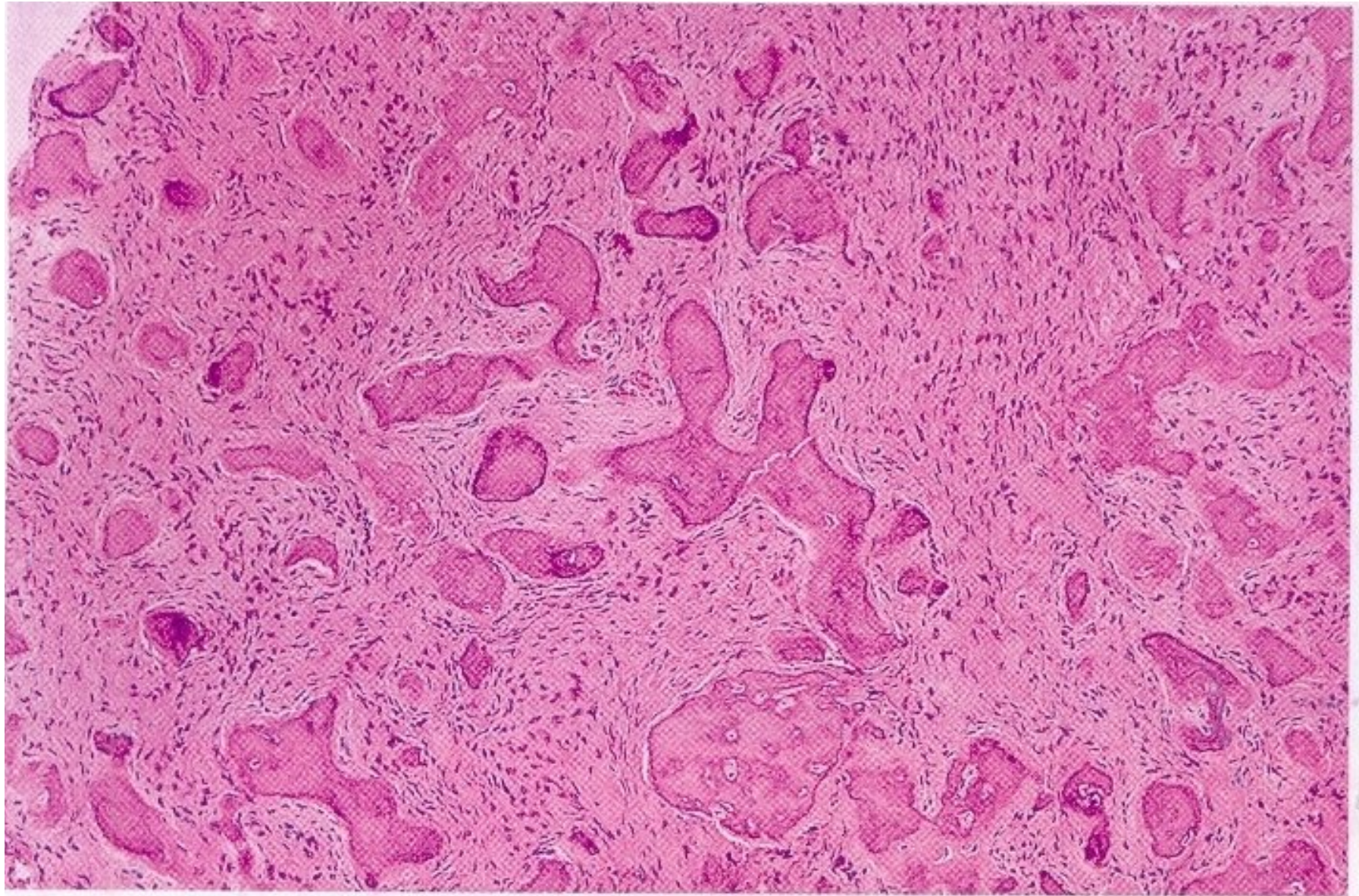
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- Multi-focal involvement
 - Marked tendency for bilateral & often symmetrical involvement
 - May present as extensive lesions in all four posterior quadrants
 - Patients may complain of dull ache
 - Radiographically, identical pattern of maturation noted in other two forms

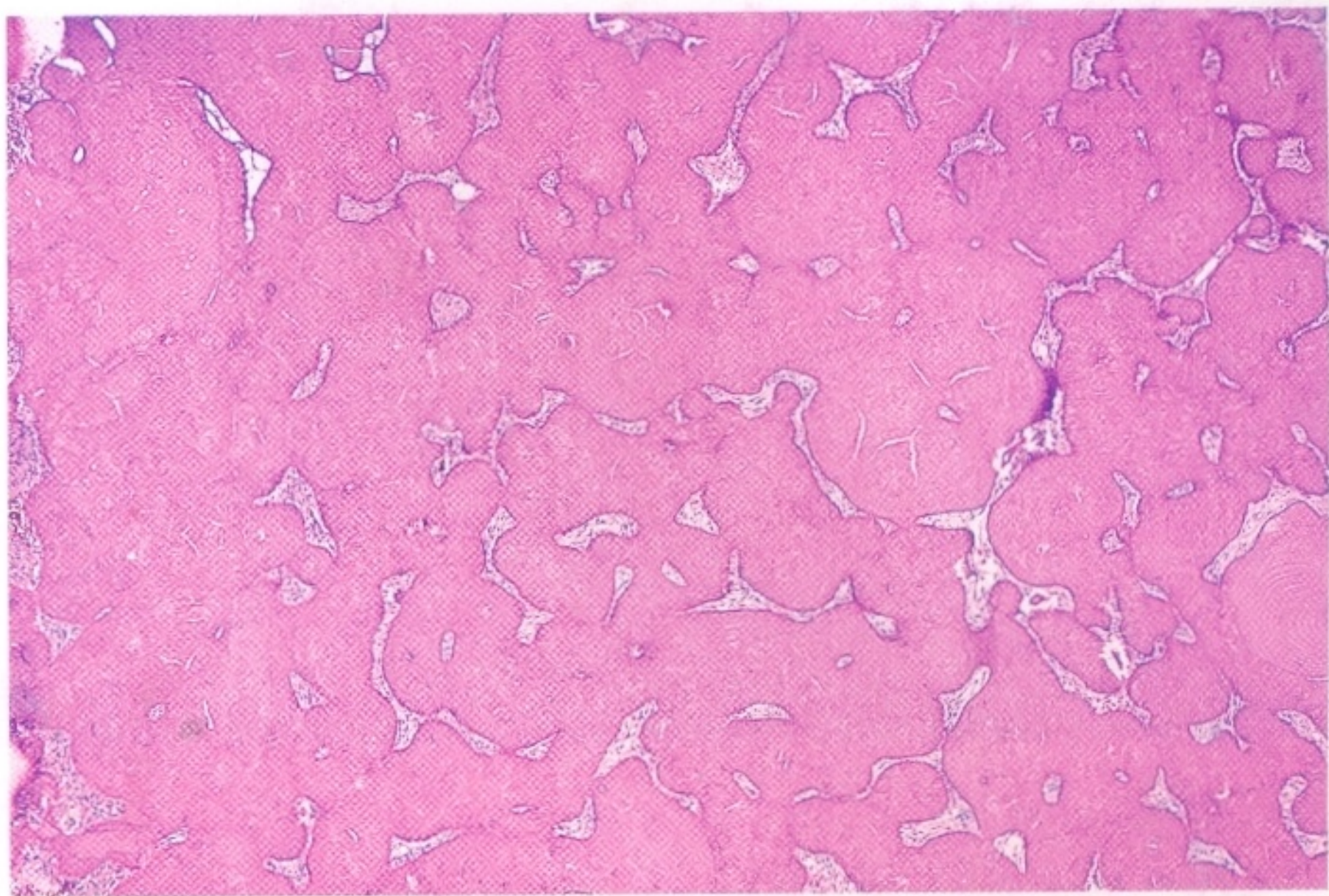


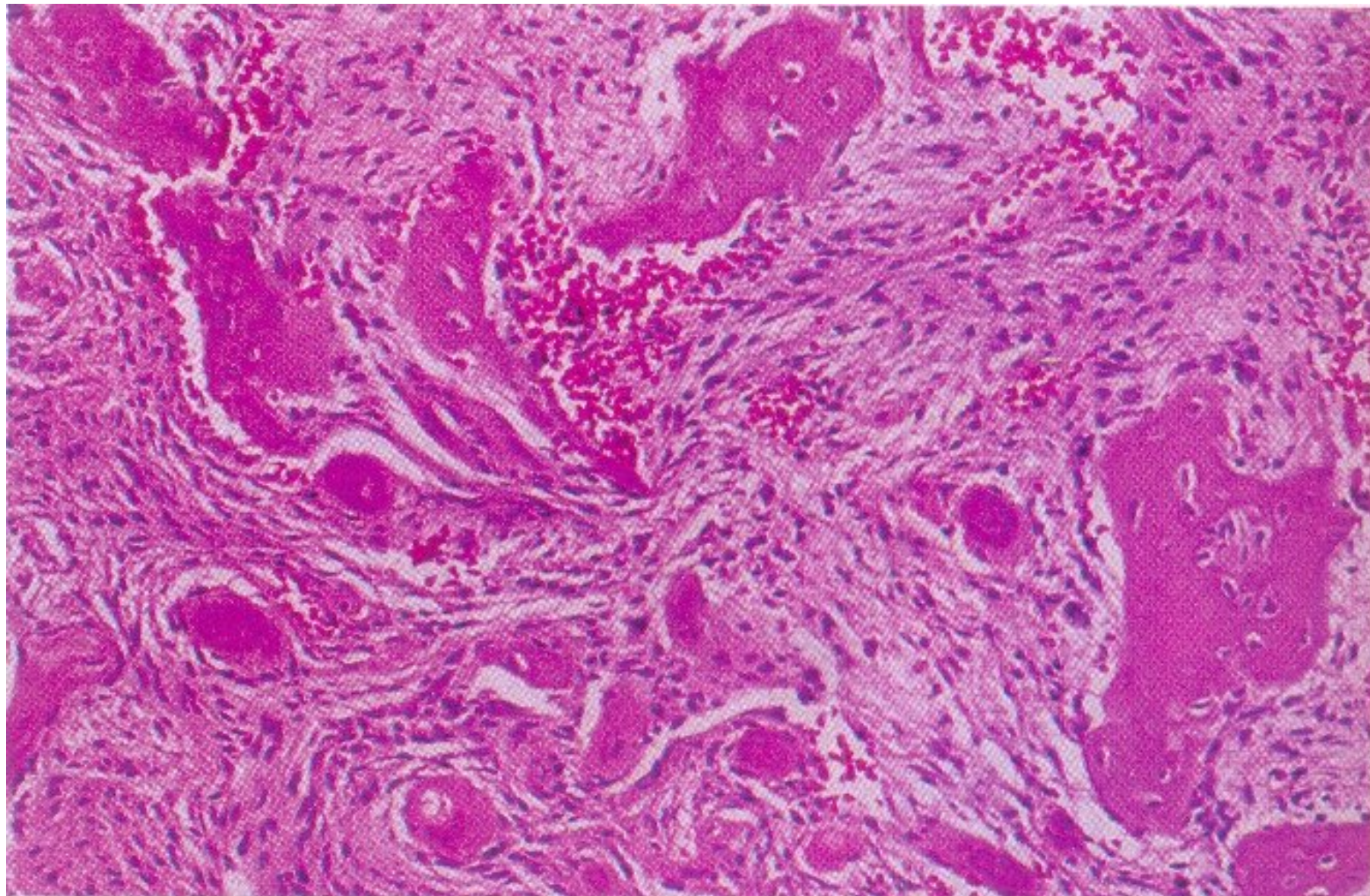


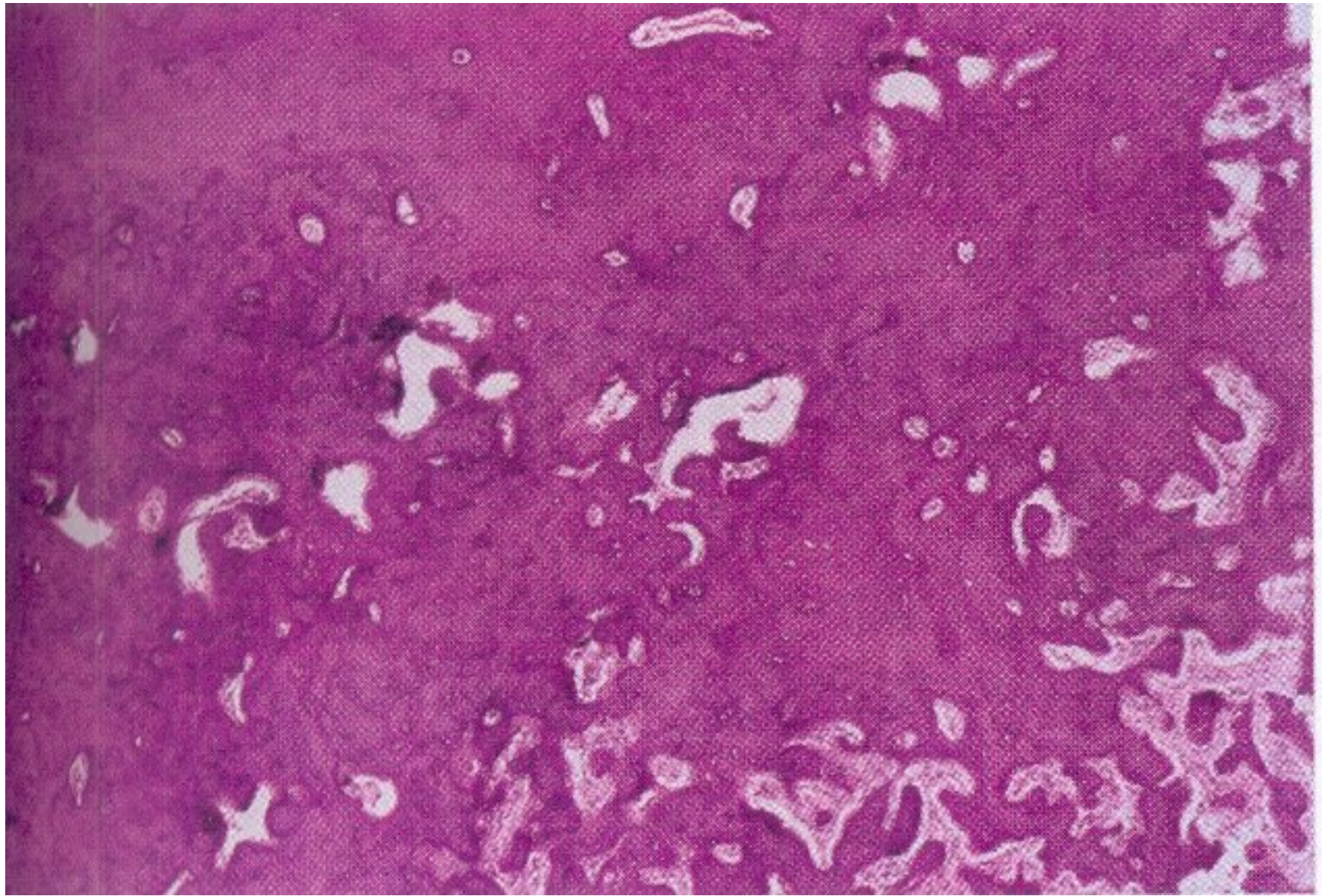
HISTOLOGIC FEATURES:


- .. All three patterns demonstrate similar histopathologic features
- .. Fragments of cellular mesenchymal tissue composed of spindle-shaped fibroblasts & collagen fibers with numerous small blood vessels
- .. Free haemorrhage
- .. Mixture of woven bone, lamellar bone & cementum-like particles

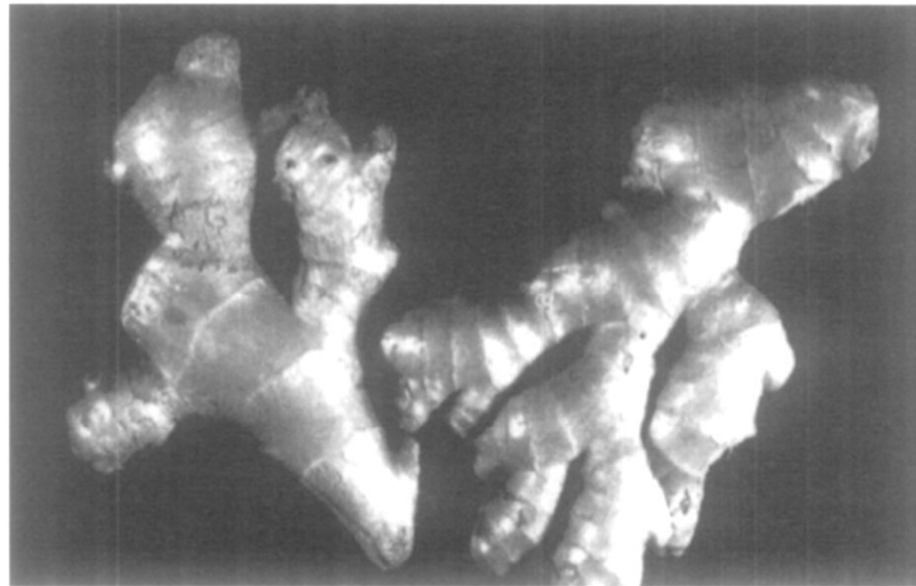
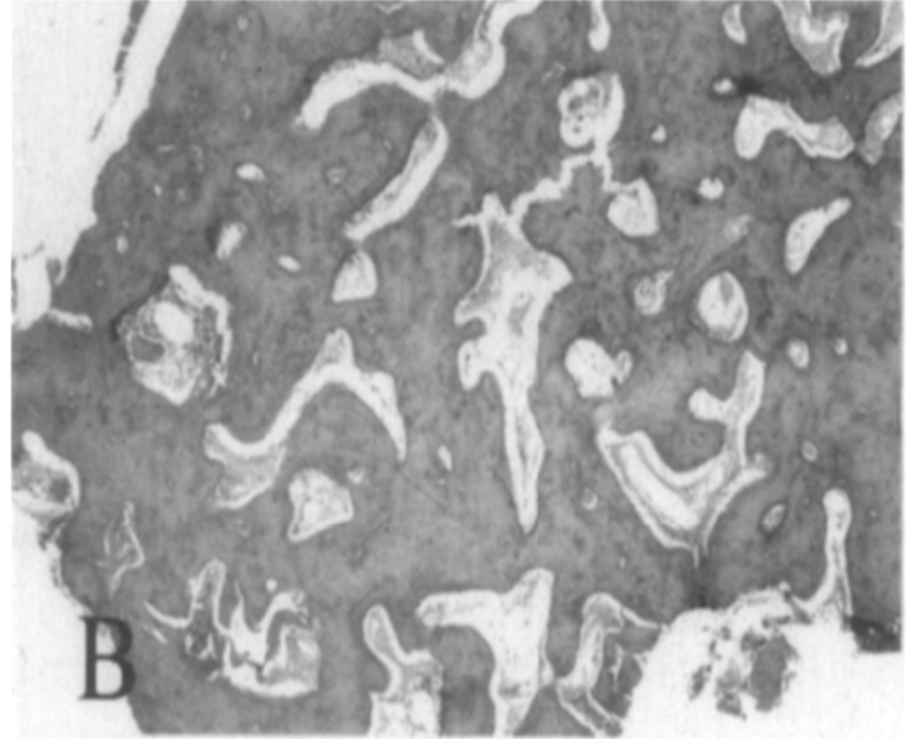
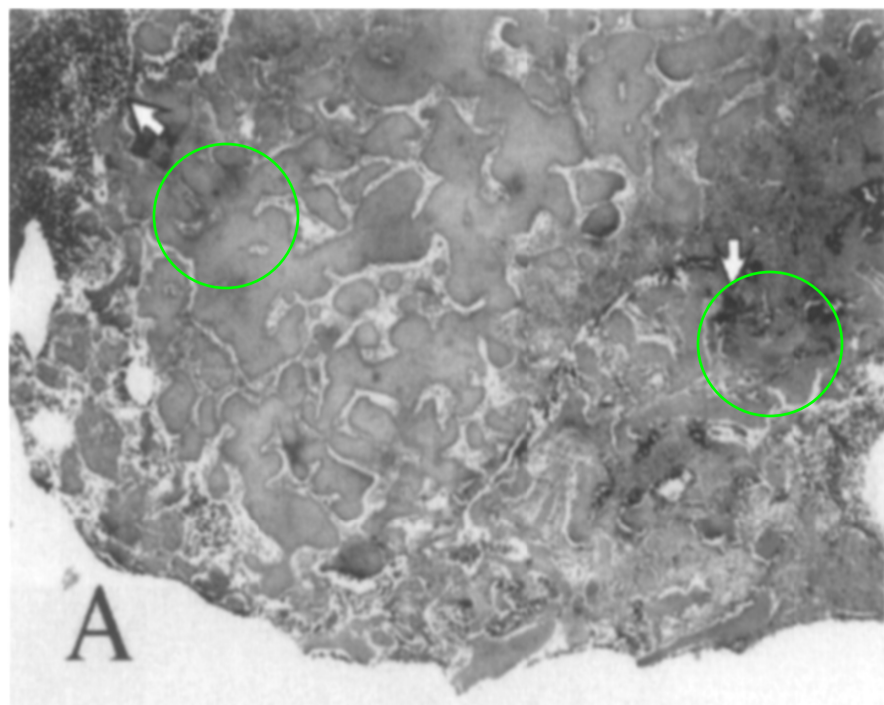








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- Proportion of mineralized material varies
 - As lesions mature- the ratio of fibrous connective tissue to mineralized materials decreases.
 - Bony trabeculae become thick curvilinear structures- resemble shape of ginger roots
 - Individual trabeculae fuse & form lobular masses



Summary

- Clinical features, oral manifestations, radiographic features, histopathological features, & surgical management of Periapical Cemento-osseous Dysplasias, Focal Cemento-osseous Dysplasias, & Florid Cemento-osseous Dysplasias

BIBLIOGRAPHY

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- ✓ Oral and Maxillofacial Pathology Neville, Brad W. 2nd
- ✓ Lucas's Pathology Of Tumor's of the Oral Tissues



Thank You