Peripheral Ossifying Fibroma

Group 5, 5B- 3,October 7, 2020

Rounds Team

- Group Leader: Dr. Dix
- Specialty Leader: Dr. Demiturk
- Project Team Leader: Maggie Schlindwein
- Project Team Participants: Lester Chadwick ; Samantha Mandel; Alexis Brady

Patient

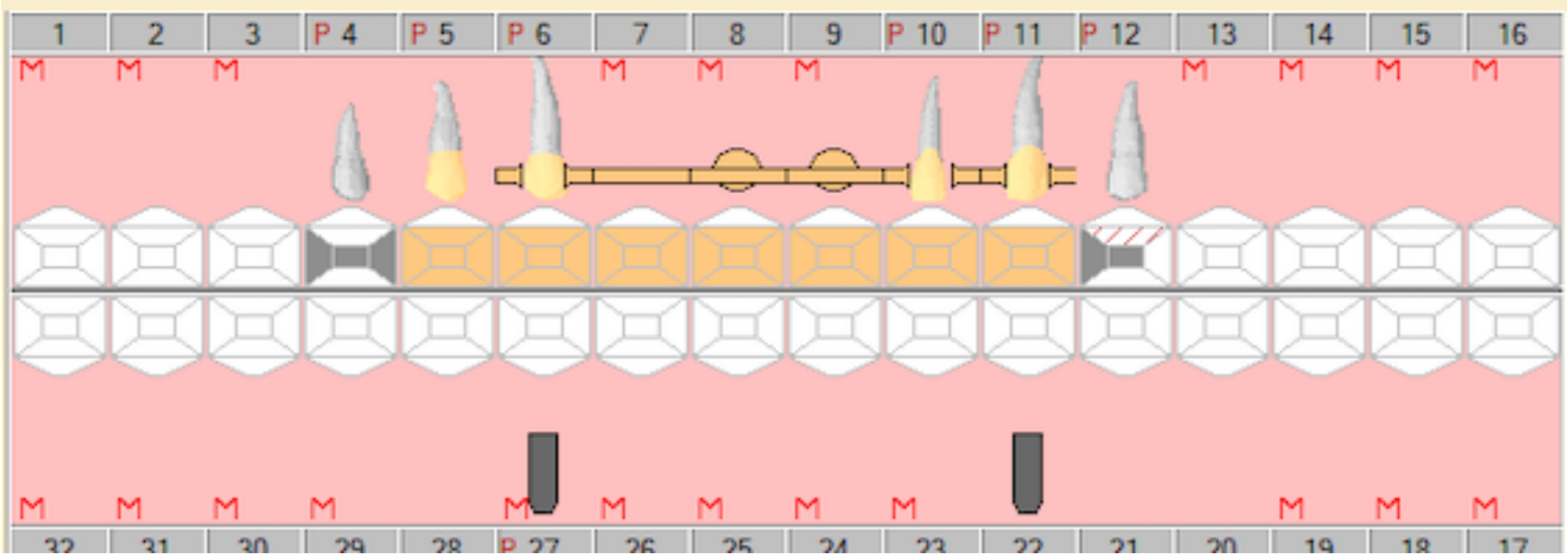
- 77 year old
- Male
- Caucasian
- Chief Complaint: “My implants are loose”
- Additional pertinent information

Medical History

- 1 slide describing medical history
- Diagnoses
- Benign prostate tumor (2014), stroke (2013), osteoarthritis, vision & hearing problems
- 81 mg aspirin
- Medical Consults, if any
- Treatment considerations

Dental History

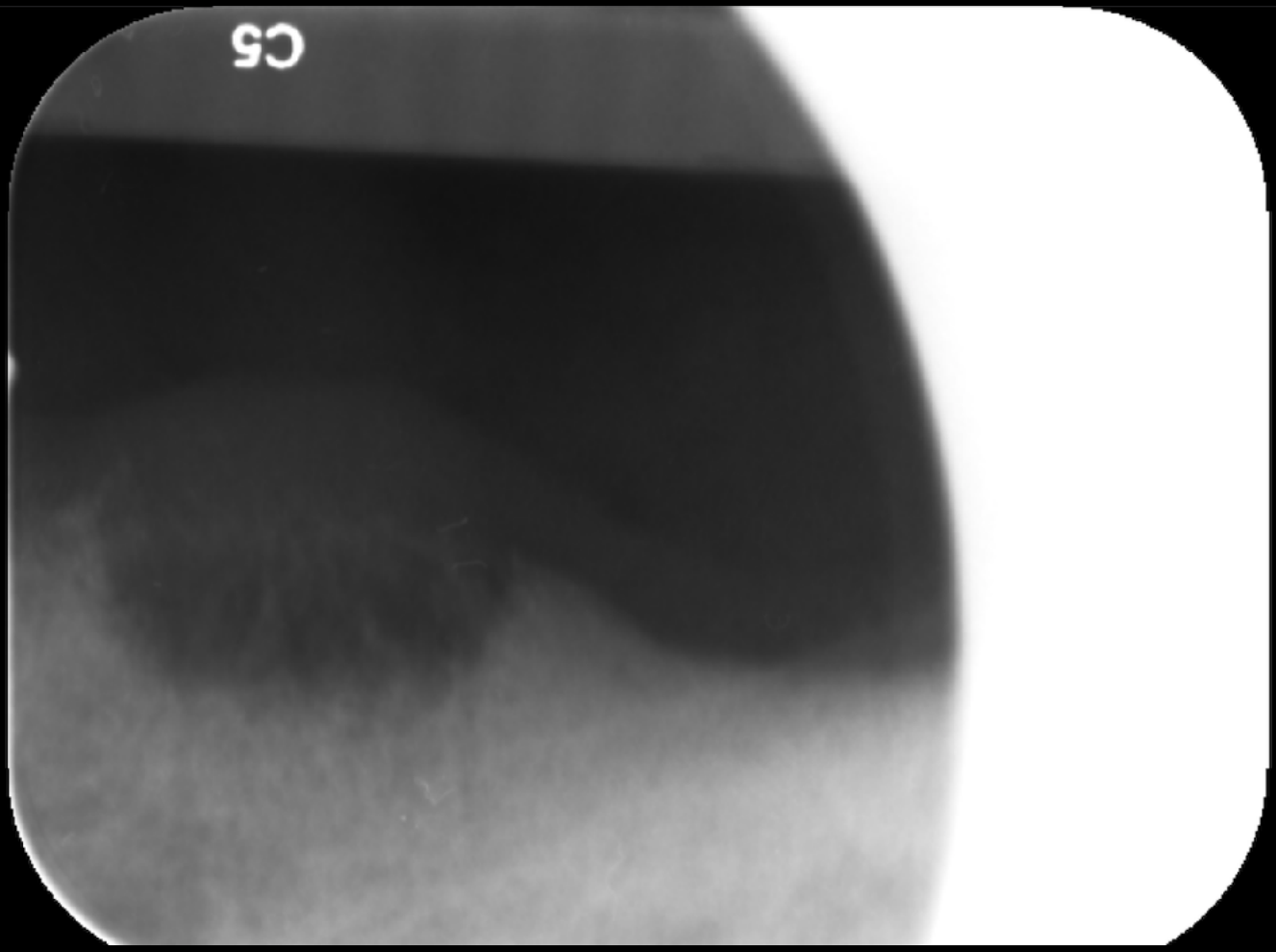
- MOD amalgam #4; MO amalgam #12
- PFM crown #5
- PFM bridge #6-11
- Implants at #22 & #27
- Missing #1- 3, 13-32



Radiographs

- Panoramic

Radiographic Findings



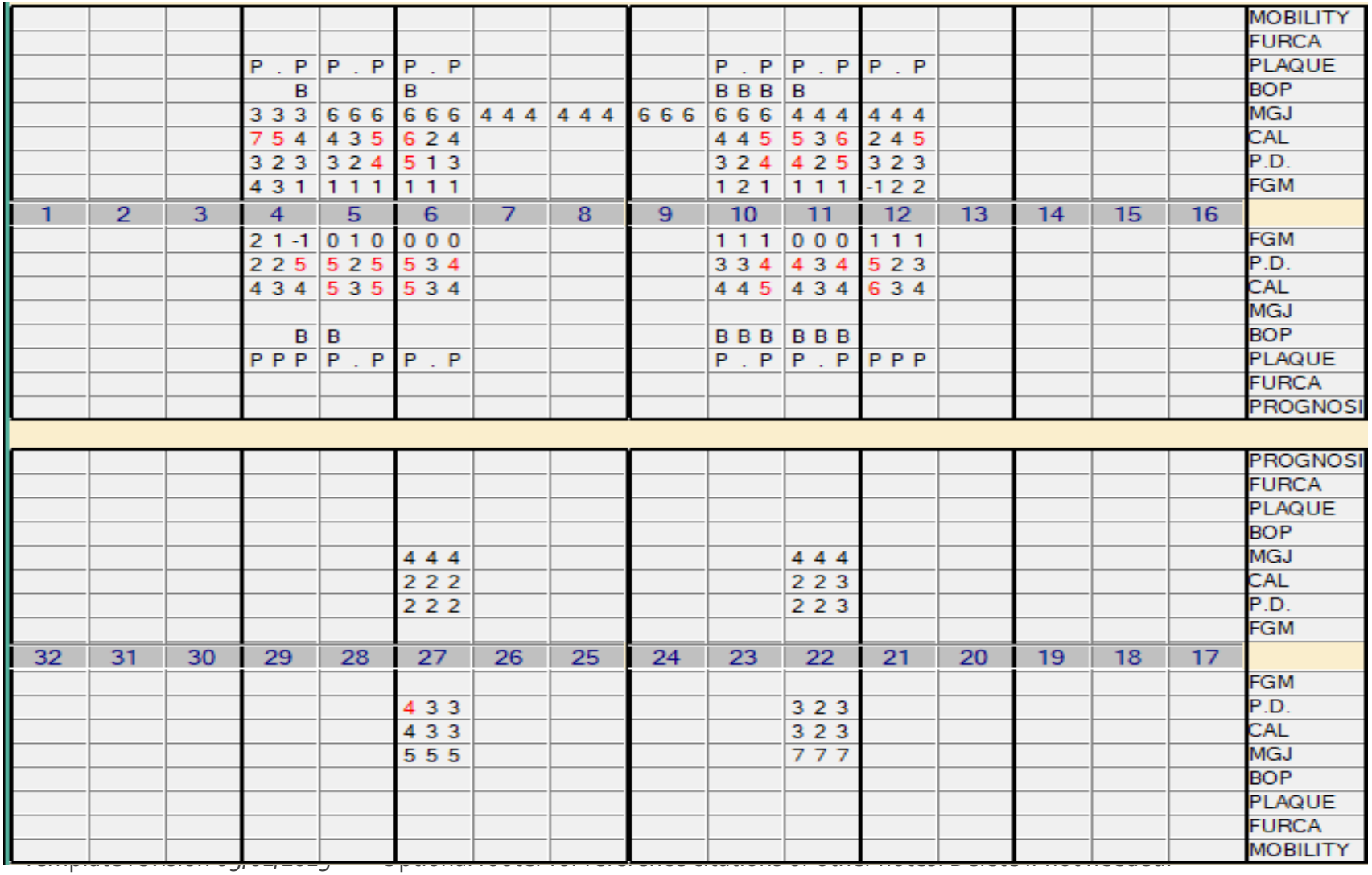
Clinical Findings

- 1 slide describing all clinical findings

Specific Findings

- Findings specific to the Rounds discussion, 1 slide

Periodontal Charting



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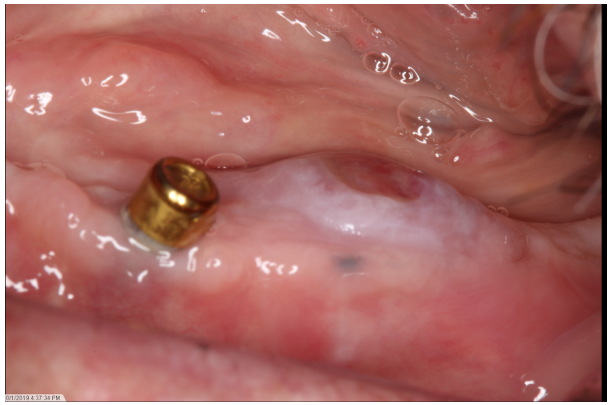
Diagnosis

- Peripheral ossifying fibroma

Problem List

- Failing implants
- Lesion in LL molar area

Appropriate Clinical Photographs



D1 Basic Science

- ***1-2 slides*** *(Summarizes written report in D1 Basic Sciences Template posted in Rounds Website.)*
- ***D1 Basic Science Question:***
- ***Discussion:***
- ***Reference citation(s):***

D2 Pathology: What is a peripheral ossifying fibroma?

- A reactive inflammatory process that results in a benign tumor
- Mixture of connective tissue stroma with calcifications in the interdental region
- Parakeratinized stratified squamous epithelium overlying fibro-cellular CT with haphazardly laid spindle cells, lymphocytes, and calcifications (cementum, woven and lamellar bone.
- Normally appear in females, maxilla region, in 3rd and 4th decades of life
- Diagnosed via histological examination- clinically confused with pyogenic granulomas, They often appear red/pink in color, can be sessile or pedunculated, and has a broad base by which is attaches to underlying tissue

References:
Burkhart, N. W. (2017, January 16). Please Enable Cookies. Retrieved September 03, 2020, from https://www.rdhmag.com/patient-care/article/16409902/similar-appearances-in-oral-pathology-is-it-a-peripheral-ossifying-fibroma-or-a-pyogenic-granuloma

Childers, E., Morton, I., Fryer, C., & Shokrani, B. (2013, July 16). Giant peripheral ossifying fibroma: A case report and clinicopathologic review of 10 cases from the literature. Retrieved September 03, 2020, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3824796/

Lázare, H., Peteiro, A., Sayáns, M., Gándara-Vila, P., Caneiro, J., García-García, A., . . . Suárez-Peñaranda, J. (2019, October 08). Clinicopathological features of peripheral ossifying fibroma in a series of 41 patients. Retrieved September 10, 2020, from https://www.sciencedirect.com/science/article/pii/S0266435619303900

Nadimpalli, H., & Kadakampally, D. (2017, November 28). Recurrent peripheral ossifying fibroma: Case report. Retrieved September 3, 2020, from http://www.dmp.umed.wroc.pl/pdf/2018/55/1/83.pdf

D2 Pathology: What is a peripheral ossifying fibroma?

- Comparison: Pyogenic granulomas are erythematous/red in color and is ulcered at the surface. Under the microscope it appears as very vascularized granulation tissue no calcifications
- POF is usually <2 cm but there have been reports of larger or giant POFs
- For treatment early diagnosis is very important- Excision and curettage of surrounding tissue prevents recurrence
- Believed to originate from PDL but it is unknown. Plaque, calculus, trauma, microorganisms and trauma are all thought to be triggers

References:
Burkhart, N. W. (2017, January 16). Please Enable Cookies. Retrieved September 03, 2020, from https://www.rdhmag.com/patient-care/article/16409902/similar-appearances-in-oral-pathology-is-it-a-peripheral-ossifying-fibroma-or-a-pyogenic-granuloma

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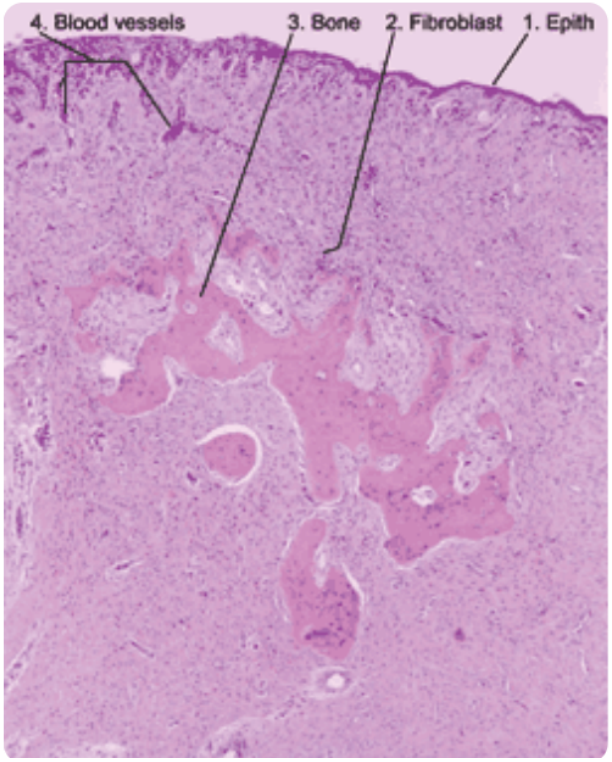
D2: Peripheral ossifying fibroma



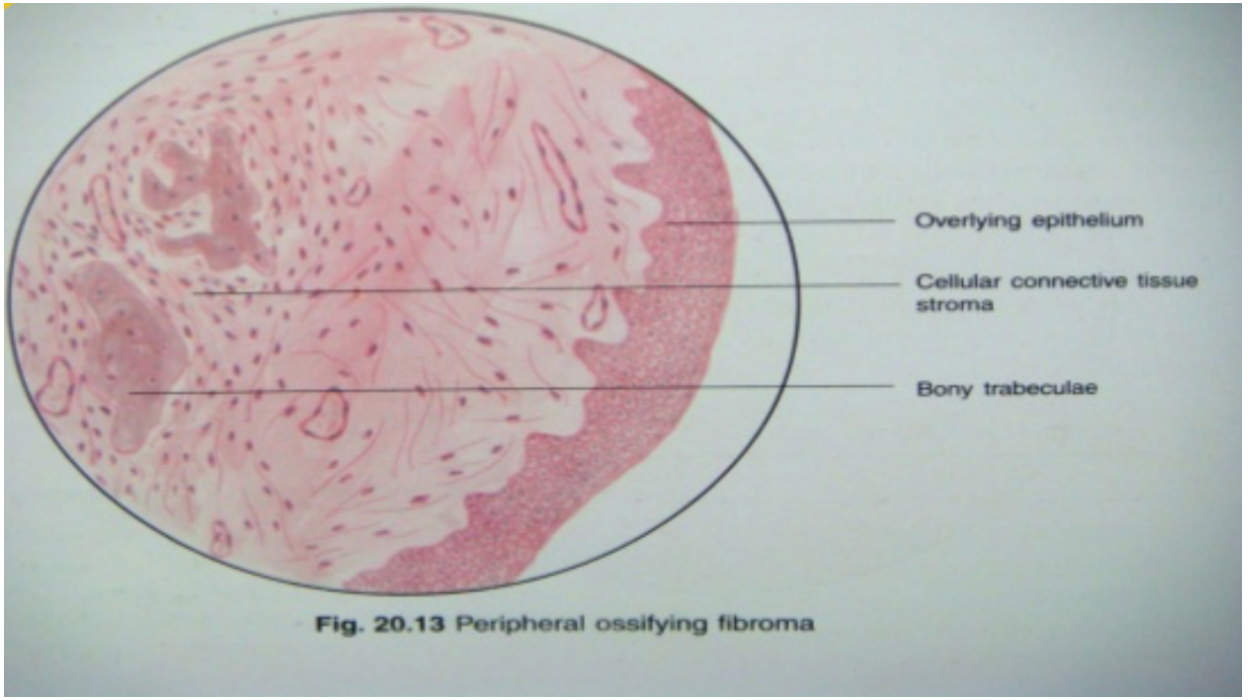


Fig. 20.13 Peripheral ossifying fibroma

Image References:
Burkhart, N. W. (2017, January 16). Please Enable Cookies. Retrieved September 03, 2020, from https://www.rdhmag.com/patient-care/article/16409902/similar-appearances-in-oral-pathology-is-it-a-peripheral-ossifying-fibroma-or-a-pyogenic-granuloma

Indian dental academy Follow. (2016, June 21). Benign connective tissue tumors 2/ dental implant courses by Indian d... Retrieved September 15, 2020, from https://www.slideshare.net/indiandentalacademy/benign-ct-tumors-2-dental-implant-courses-by-indian-dental-academy

D3 PICO

- **Clinical Question:**

What is the differential treatment plan for a peripheral ossifying fibroma?

PICO Format

P: Ill-defined lesion

I: Excisional biopsy

C: Incisional biopsy

O: Prevent spread of disease

PICO Formatted Question

- In a patient with an ill-defined lesion, does incisional versus excisional biopsy better prevent spread of disease?

Clinical Bottom Line

- Excisional with adjunctive techniques better prevents spread of disease, but incisional better preserves function and esthetics

Search Background

- **Date(s) of Search:** 9/10/20, 9/13/20
- **Database(s) Used: PubMed**
- **Search Strategy/Keywords:** peripheral ossifying fibroma, recurrence rate, conservative treatment, oral pathology

Search Background

- MESH terms used: fibroma, ossifying/surgery; fibroma, ossifying; surgical procedures, operative

Article 1

- Slusarenko da Silva Y, Tartaroti NA, Sendyk DI, Deboni MCZ, Naclério-Homem MDG. Is conservative surgery a better choice for the solid/multicystic ameloblastoma than radical surgery regarding recurrence? A systematic review. *Oral Maxillofac Surg*. 2018;22(4):349-356. doi:10.1007/s10006-018-0715-9

- Study Design: systematic review

- Purpose: To determine if conservative surgery of primary solid/multicystic ameloblastoma is capable of decreasing recurrence rate as effectively as radical surgery

Article 1 Synopsis

- Method: searched databases for original studies on the conservative versus radical surgeries
  - Performed a meta-analysis
  - Started with 2647 studies which was reduced to 7
- Results: Values obtained showed that recurrence rate after conservative surgery is neither comparable nor lower than the radical surgery
- Conclusions: conservative surgery doesn't reduce recurrence rate as efficiently as radical surgery for primary SMA
  - Not enough evidence to support this statement
- Limitations: more studies needed for proper analysis and comparison

Slusarenko da Silva Y, Tartaroti NA, Sendyk DI, Deboni MCZ, Naclério-Homem MDG. Is conservative surgery a better choice for the solid/multicystic ameloblastoma than radical surgery regarding recurrence? A systematic review. *Oral Maxillofac Surg*. 2018;22(4):349-356. doi:10.1007/s10006-018-0715-9

Article 1 Selection

- Systematic review relating to incisional versus excisional
- Analyzing removing a benign tumor from the jaw

Article 2

- Titinchi F, Morkel J. Ossifying Fibroma: Analysis of Treatment Methods and Recurrence Patterns. *J Oral Maxillofac Surg*. 2016;74(12):2409-2419. doi:10.1016/j.joms.2016.05.018

- Study Design: Retrospective case-study

- Study Purpose: to determine the clinical and radiologic features of OF pts; reviewed management methods and recurrence patters

Article 2 Synopsis

- Method: performed a retrospective case-series analysis of OF cases from 1976-2014; analyzed management of and follow-up for each case, demographic data, clinical presentation, and radiographic features; developed a surgical protocol based on findings
- Results: included 61 cases; Most pts were females <40 y.o., mand. Post. Affected most, surgical curettage trx used most often
- Conclusions: surgical curettage as trx is acceptable with low rate of recurrence; resection used for aggressive, recurrent lesions
- Limitations: longer follow-up periods needed

Titinchi F, Morkel J. Ossifying Fibroma: Analysis of Treatment Methods and Recurrence Patterns. *J Oral Maxillofac Surg*. 2016;74(12):2409-2419. doi:10.1016/j.joms.2016.05.018

Article 2 Selection

- Analyzed Ossifying Fibromas
  - Discussed treatment methods and recurrence patterns
  - Compared excisional versus incisional biopsy

Titinchi F, Morkel J. Ossifying Fibroma: Analysis of Treatment Methods and Recurrence Patterns. *J Oral Maxillofac Surg*. 2016;74(12):2409-2419. doi:10.1016/j.joms.2016.05.018

Article 3

- B.R. Chrcanovic, R.S. Gomez, Juvenile ossifying fibroma of the jaws and paranasal sinuses: a systematic review of the cases reported in the literature, International Journal of Oral and Maxillofacial Surgery, Volume 49, Issue 1, 2020, Pages 28-37, ISSN 0901-5027, https://doi.org/10.1016/j.ijom.2019.06.029.

- Study Design: Systematic Review

- Study Purpose: compare clinical and radiological features of JOF, trabecular JOF, and psammotmatoid JOF

Article 3 Synopsis

- Method: searched database for articles meeting criteria; examined cases based on pt demographics, lesion characteristics, and radiologic factors; analyzed recurrence probability
- Results/Conclusions: included 185 studies; JOF lesions had higher rate of recurrence after trx by curettage and enucleation only; surgical resection had low recurrence but higher debilitating factors; enucleation followed by peripheral osteotomy should be trx of choice
- Limitations: retrospective nature of the studies, lacked some detailed info in certain cases looked at

B.R. Chrcanovic, R.S. Gomez, Juvenile ossifying fibroma of the jaws and paranasal sinuses: a systematic review of the cases reported in the literature, International Journal of Oral and Maxillofacial Surgery, Volume 49, Issue 1, 2020, Pages 28-37, ISSN 0901-5027, https://doi.org/10.1016/j.ijom.2019.06.029.

Article 3 Selection

- Analyzed Ossifying Fibromas
  - Discussed how each surgical procedure related to recurrence

B.R. Chrcanovic, R.S. Gomez, Juvenile ossifying fibroma of the jaws and paranasal sinuses: a systematic review of the cases reported in the literature, International Journal of Oral and Maxillofacial Surgery, Volume 49, Issue 1, 2020, Pages 28-37, ISSN 0901-5027, https://doi.org/10.1016/j.ijom.2019.06.029.

Article 4

- Yadav R, Gulati A. Peripheral ossifying fibroma: a case report. *J Oral Sci*. 2009;51(1):151-154. doi:10.2334/josnusd.51.151

- Study Design: Case Report

- Study Purpose: presents a clinical example of how POF can occur and where/who is more likely to have this lesion

Article 4 Synopsis

- Case: 35 y.o. woman presents with a lump behind her mand ant right side that has gradually grown over 2 yrs
  - Lesion presents as exophytic, pinkish mass in the lingual mand right incisor/canine region
- Method: performed excisional biopsy under LA, recall of 9 months revealed satisfactory healing and no recurrence
- Conclusion: trx of choice is total surgical excision with meticulous root planing and curettage to prevent recurrence
- Limitations: longer recall period needed, case report

Yadav R, Gulati A. Peripheral ossifying fibroma: a case report. *J Oral Sci*. 2009;51(1):151-154. doi:10.2334/josnusd.51.151

Article 4 Selection

- Case report on peripheral ossifying fibroma
  - Discussed treatment options and recurrence

B.R. Chrcanovic, R.S. Gomez, Juvenile ossifying fibroma of the jaws and paranasal sinuses: a systematic review of the cases reported in the literature, International Journal of Oral and Maxillofacial Surgery, Volume 49, Issue 1, 2020, Pages 28-37, ISSN 0901-5027, https://doi.org/10.1016/j.ijom.2019.06.029.

Levels of Evidence

- ☐ **1a** – Clinical Practice Guideline, Meta-Analysis, Systematic Review of Randomized Control Trials (RCTs)
- ☐ **1b** – Individual RCT
- ☒ **2a** – Systematic Review of Cohort Studies
- ☐ **2b** – Individual Cohort Study
- ☐ **3** – Cross-sectional Studies, Ecologic Studies, "Outcomes" Research
- ☒ **4a** – Systematic Review of Case Control Studies
- ☐ **4b** – Individual Case Control Study
- ☒ **5** – Case Series, Case Reports
- ☐ **6** – Expert Opinion without explicit critical appraisal, Narrative Review
- ☐ **7** – Animal Research
- ☐ **8** – In Vitro Research

Double click table to activate check-boxes

Strength of Recommendation Taxonomy (SORT)

☐	**A** – Consistent, good quality patient oriented evidence
☒	**B** – Inconsistent or limited quality patient oriented evidence
☐	**C** – Consensus, disease oriented evidence, usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening

Double click table to activate check-boxes

Conclusions: D3

- Difficult finding literature specific to POF
- Analyzing excision versus incision reveals excision with adjunctive therapy is most efficient
- Incisional biopsy is less debilitating to the pt
- Overall more studies need to be done on this, specifically POF

Conclusions: D4

- D4: how will you advise the patient?

Discussion Questions

- 1-2 slides
- List posted discussion questions
- Questions may also be from Group Leader