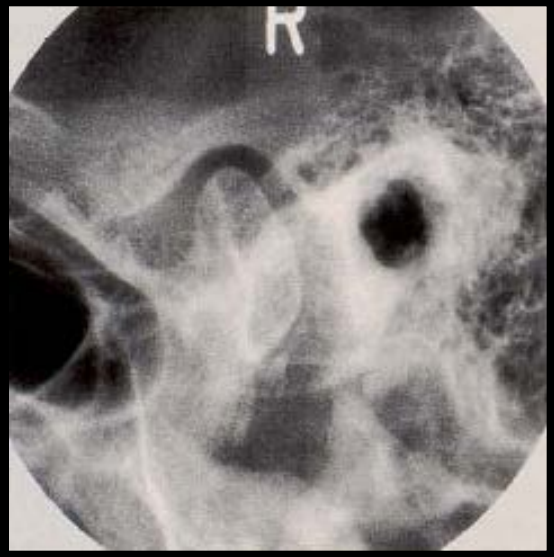
Prof.dr Simon Nikolić
stomatologija

Radiologija temporomandibularnih zglobova



MMXV

Snimak temporalnih kostiju





Schüller

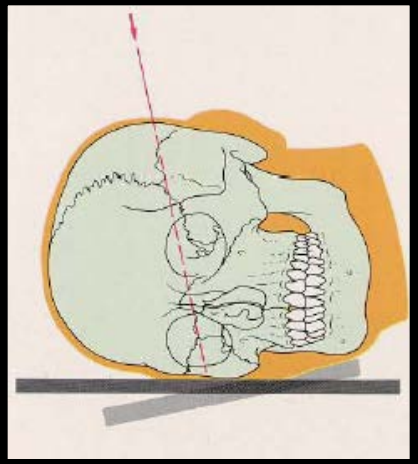
Ležeći stav, dorzalni dekubitus.

Glava u profilu.

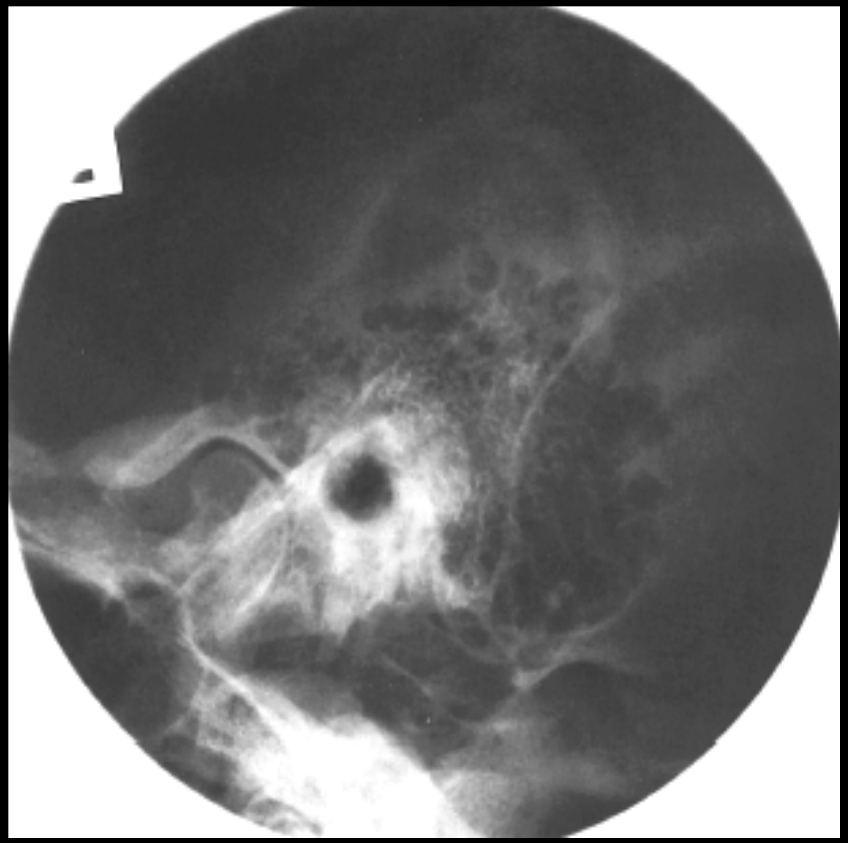
CZ za 4 cm iznad suprotnog temporo-mandibularnog zgl. 25^0-30^0 cran-kaudal. zakošenja.

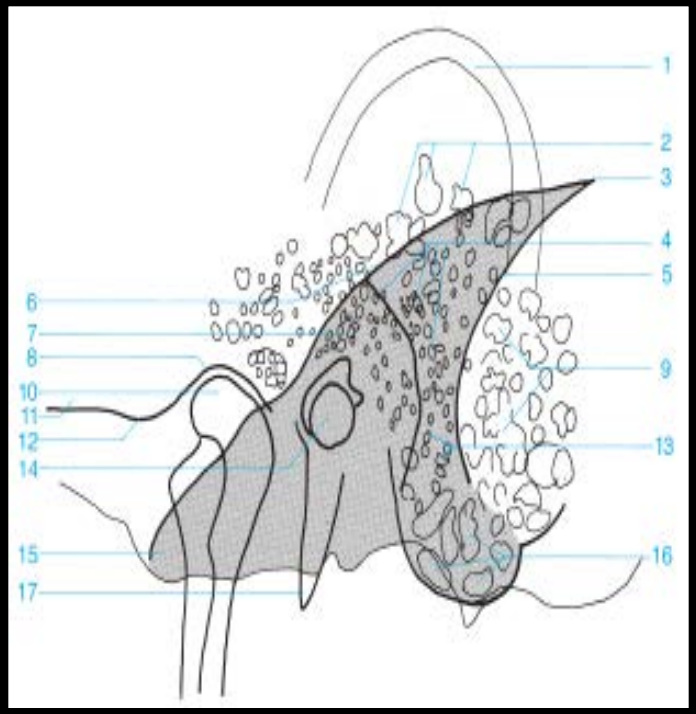
Obavezno zatvorena i otvorena usta.





Schüller





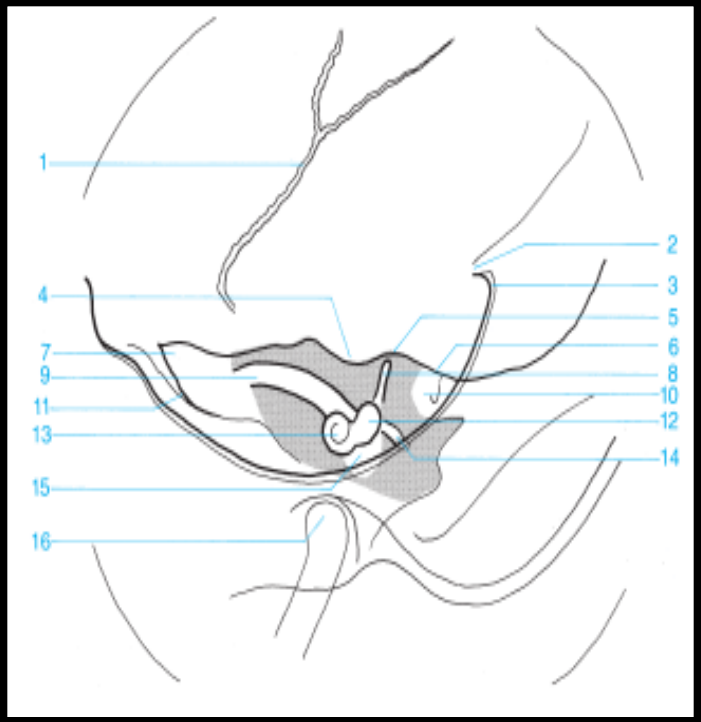
1 Outer ear
2 Squamous air cells
3 Angle of Citelli
4 Periantral air cells
5 Sulcus of the sigmoid sinus
6 Anterior margin of the petrous bone
7 Antrum of the mastoid
8 Temporomandibular joint fossa
9 Marginal air cells
10 Condyle of the mandible
11 Zygomatic process of the temporal bone
12 Articular tubercle
13 Retrofacial air cells
14 Internal and external auditory canal
15 Apex of the petrous bone
16 Air cells in the tip of the mastoid process
17 Styloid process

Ocena radiograma:

- spoljašnji ušni otvor, mastoidne ćelije

Stenvers





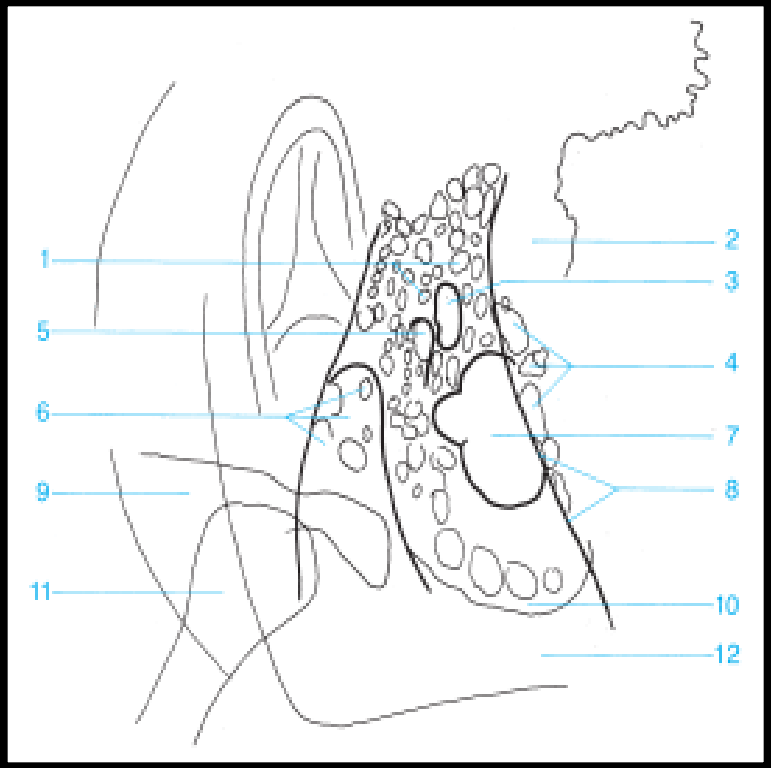
1	Sphenosquamous suture	9	Internal auditory canal
2	Internal occipital protuberance	10	Antrum
3	Internal occipital crest	11	Sphenopetrosal fissure
4	Subarcuate fossa	12	Vestibule
5	Arcuate eminence	13	Cochlea
6	Roof of the tympanic cavity	14	Lateral semicircular canal
7	Apex of the petrous pyramid	15	Tympanic cavity
8	Anterior semicircular canal	16	Condyle of the mandible

Ocena radiograma:

- tegmentum timpani

Mayer



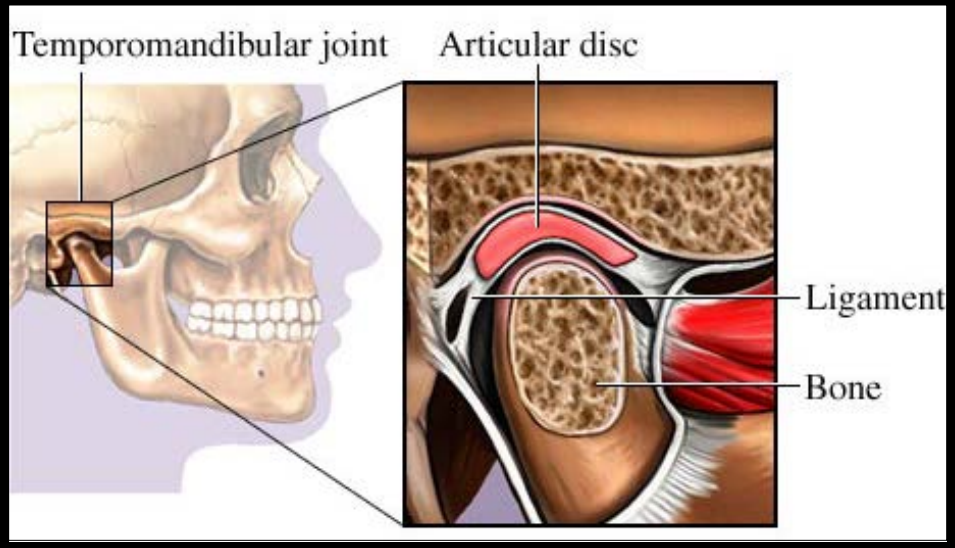


1 Periantral air cells
2 Sigmoid sinus
3 Antrum
4 Retrosinus air cells
5 Aperture of mastoid antrum
6 External auditory canal and tympanic cavity
7 Osseous labyrinth
8 Osseous sinus wall (posterior margin of the petrous bone)
9 Zygomatic bone
10 Apex of the mastoid
11 Condyle of the mandible
12 Apex of the petrous bone

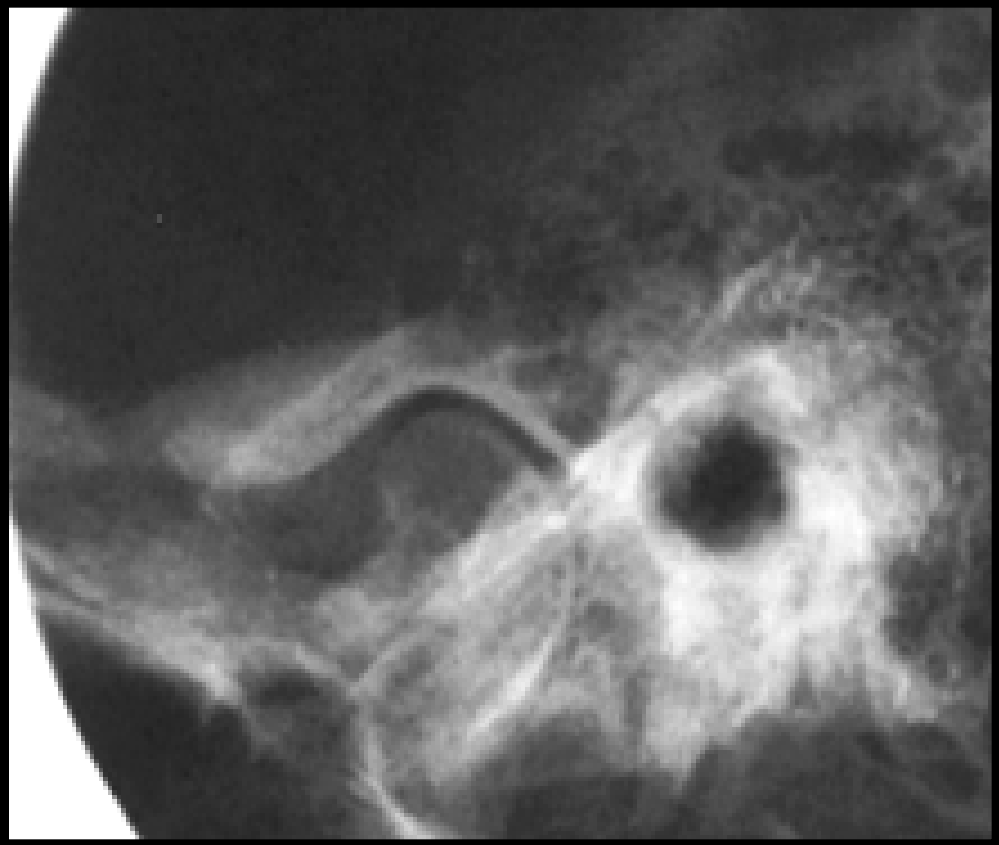
Ocena radiograma:

- mastoidne ćelije, labirint

Temporo-mandibularni zglob



- Jedini pokretni zglob glave;
- Najopterećeniji zglob čovečijeg organizma;
- L-D čine jedinstven sistem;
- Jedini u kome artikulacione površine mogu slobodno da se kreću izvan ležišta.
- Jedini koji vodi poreklo od 2 embrionalna blastoma;
- Atrikulacione površine prekrivene avaskularnim fibroznim tkivom (a ne uobičajenom hijalinom hrskavicom).



Koštani deo:

Fossa mandibularis (os temp.)

Tuberculum artculare (os zygo.)

Capitulum mandibule

Zadnji (timpanični) zid



1. kompaktna lamela kondila
2. artikularni tuberkul, fosa i petrozna kost
3. porus acusticus
4. artikulacioni disk

Hrskavičavi deo:

Meniscus - horizontalno deli zglob
- gornji menisco-temporalni i
- donji menisco-condilarni deo.

Prati pokrete capituluma.

Vezivni deo:

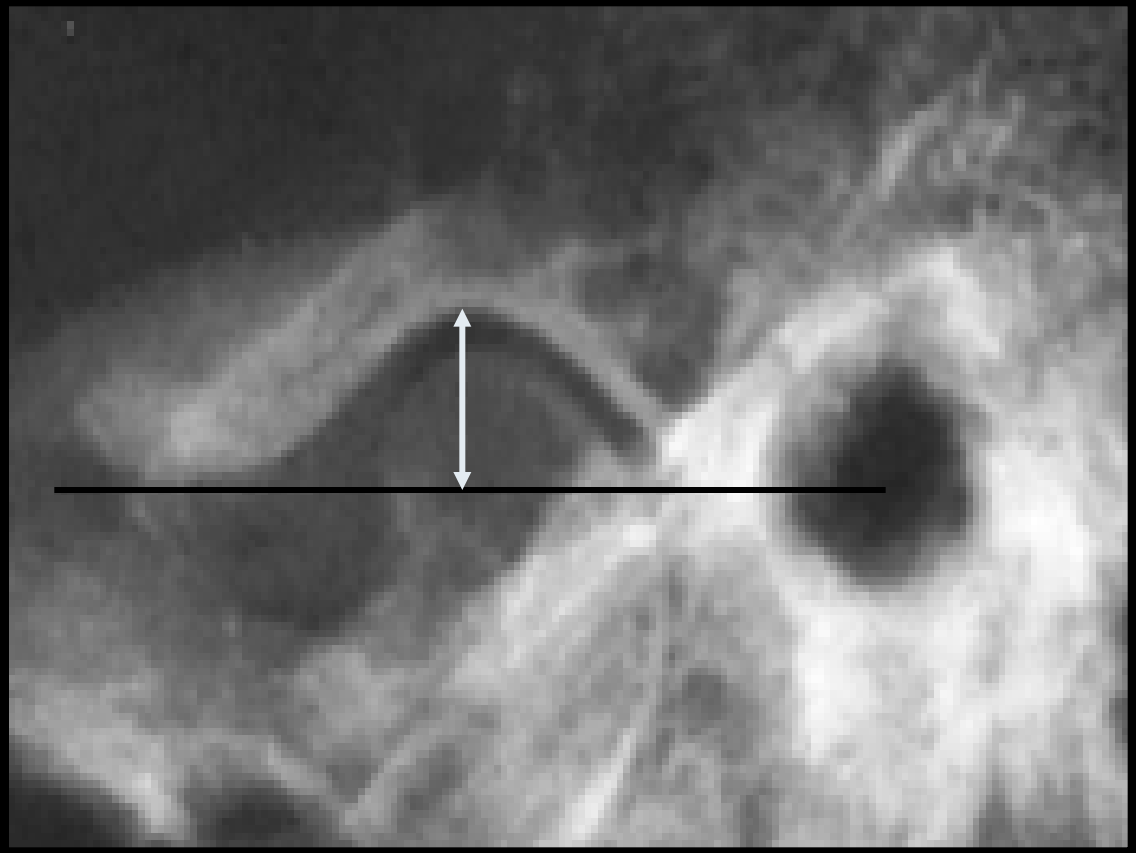
Čaura sa ligamentima

Spoljašnji sloj gustog veziva

Unutrašnji sloj pokriven tankom sinovijom.

Dubina zgl. jame

plitak	<5 mm
N	**6-7 mm** (65%)
dubok	8-9 mm

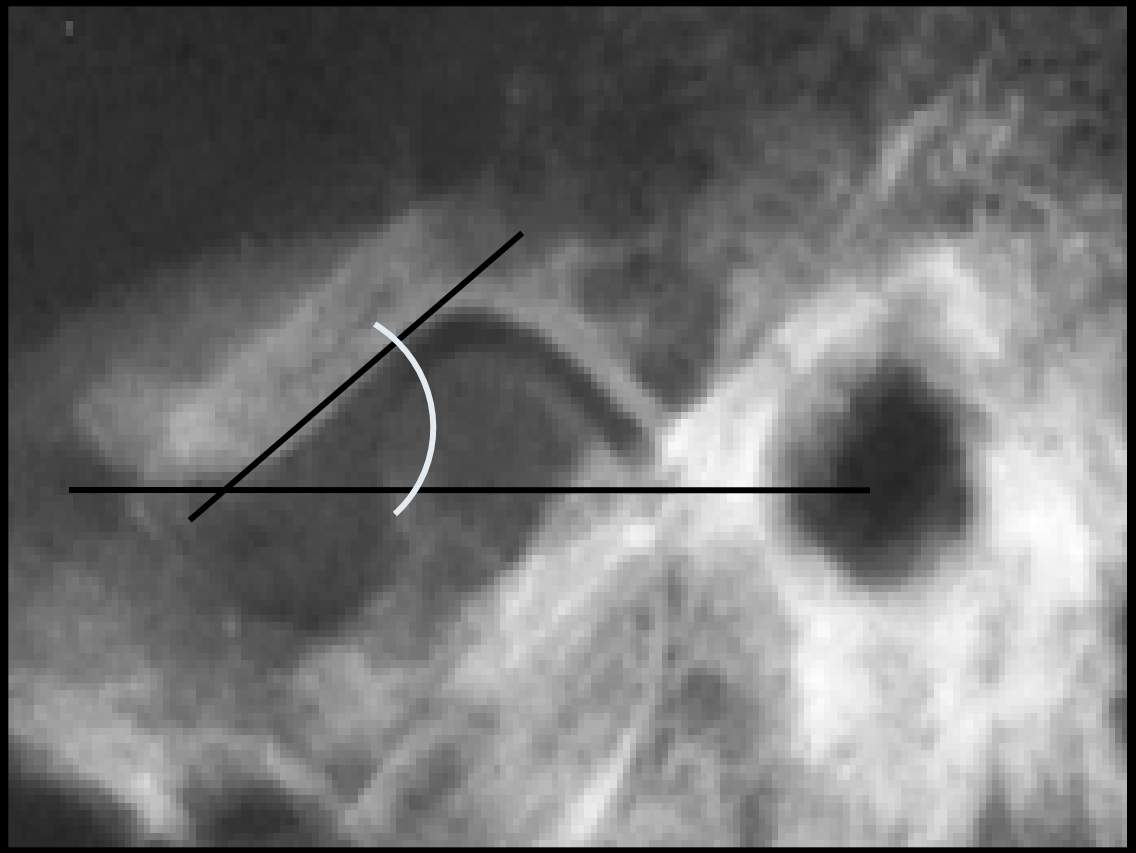


Horizontala
(najnižu tačku tuberkuluma i sredinu porusa acust.)
i najudaljenija tačka krova fose

Nagib zadnjeg zida tuberkuluma

N **33^0**

(varijacije $20\text{-}55^{0)}$



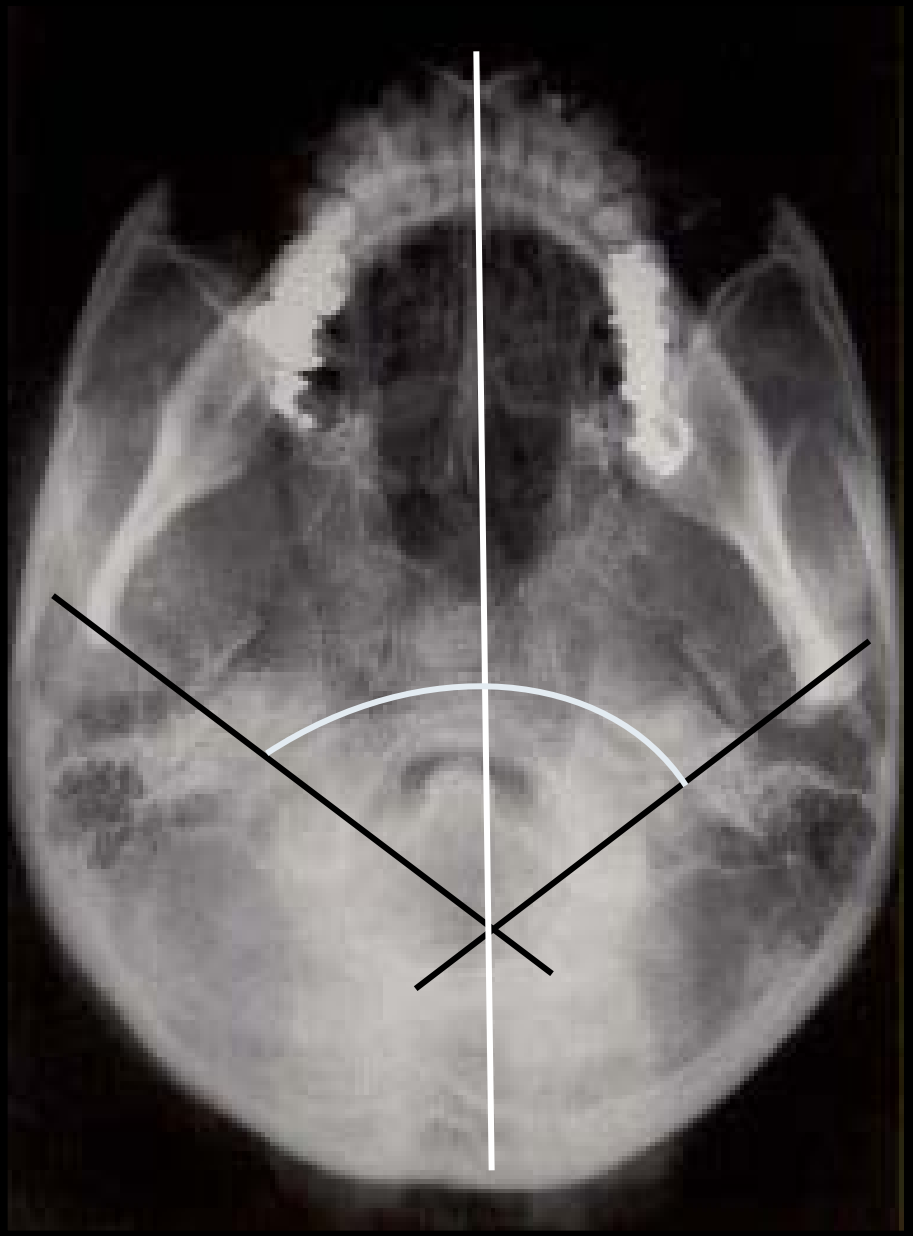
Horizontala i spoj
temena tuberkuluma i temena dna fose

Interkondilarni ugao

N **150^0**

Aksijalna linija i (interincizalnu ravan)

sagitalna ravan kondila (spajanjem 2 najistaknutije tačke na glavi kondila)

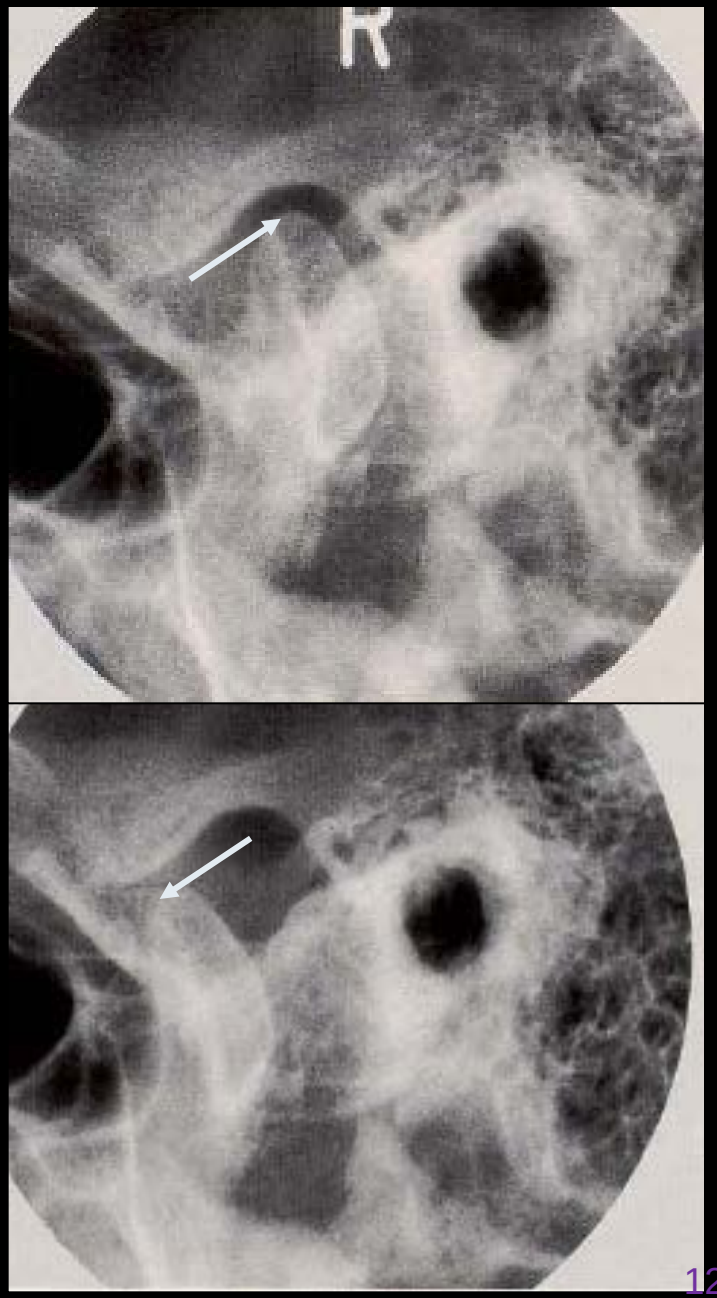


Dužina hoda glave mandibule

N	**20 mm**	**± 3mm**
subluxatio		± 5 mm
Luxatio		± 8 mm

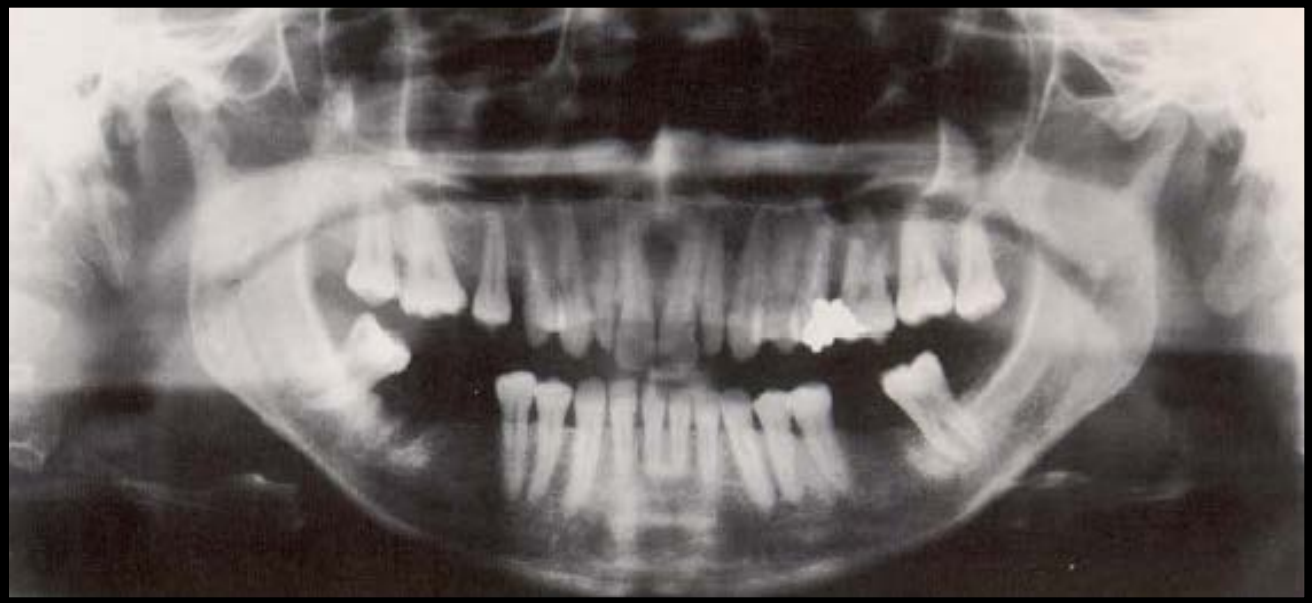
Kretanje kapitulima

fronto -kaudalno do vrha tuberculuma art.

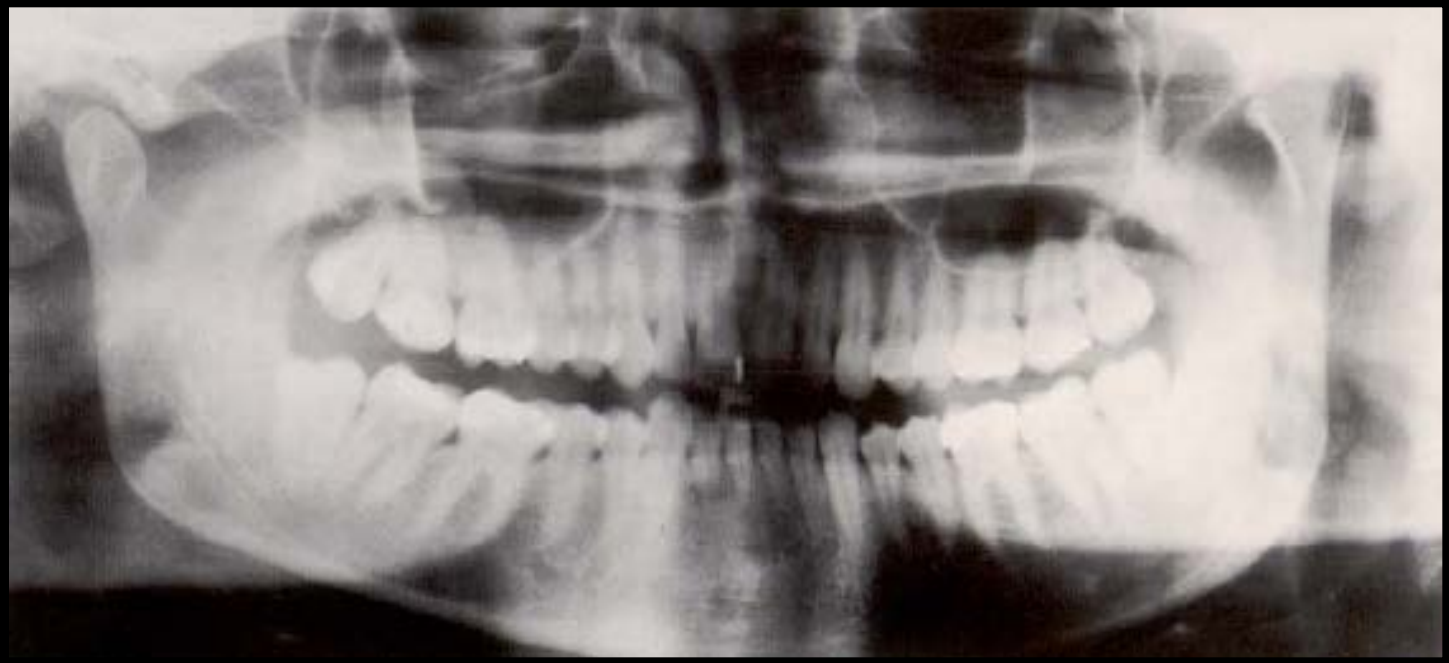




Hypoplasio unilateral condila L

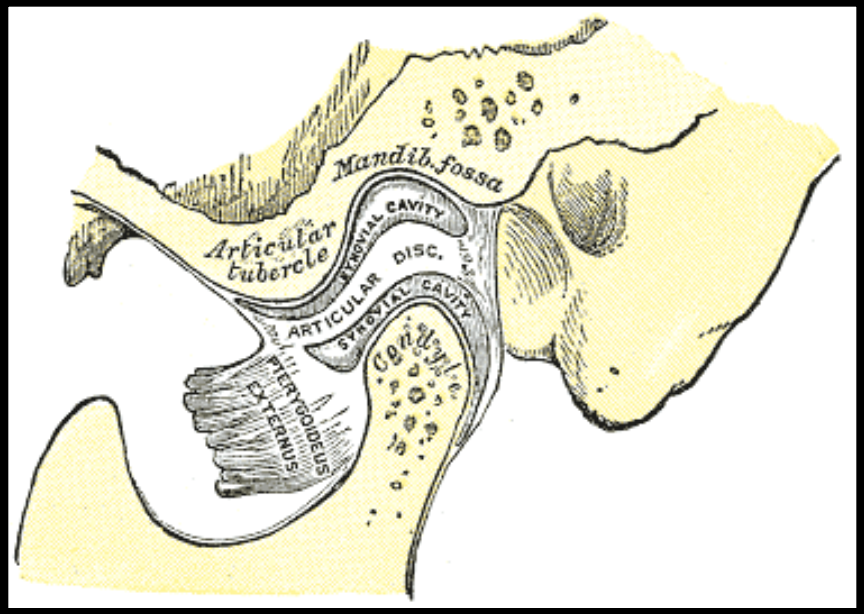


Hypoplasio bilateral



Hypertrofia condila L

Zapaljenja



- <u>Acutno - piogen</u>

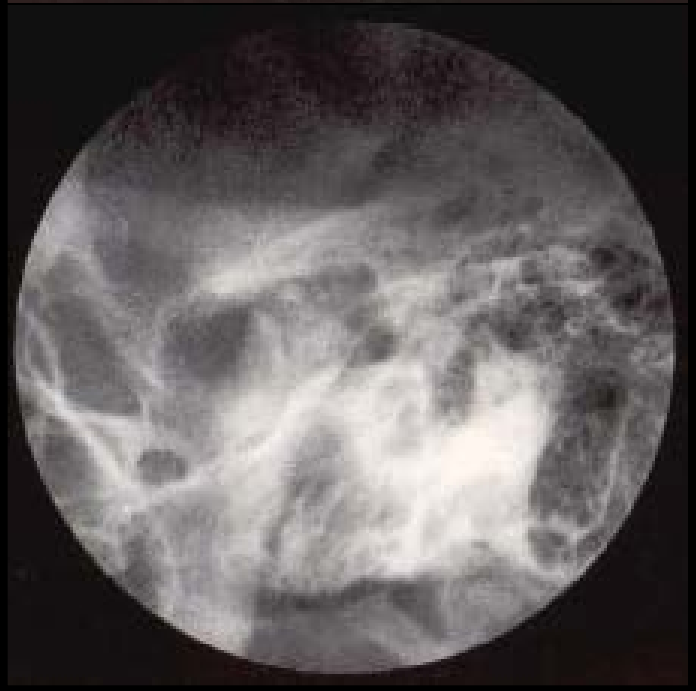
jednostrano, proširenjem infekcije iz srednjeg uha,

nadražena sinovija, zglob u celini napet, ograničeni pokreti, eksudat.

Rtg.

nakon 2-3 n. proširen zgl.prostor, niži položaj glave mandibule.





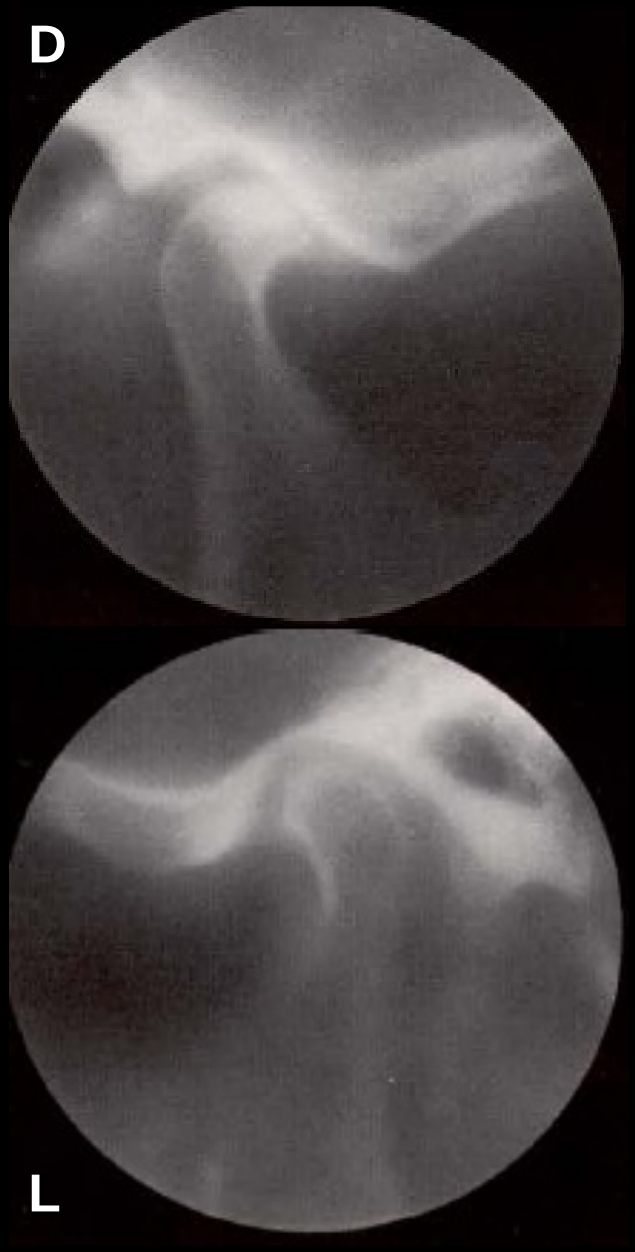
- Chr - osteomielitis

Uzure zgl.hrskavice, resorpcijom kondila, reaktivna skleroza sa gubitkom normalne konfiguracije.

Rtg.

Nepravilan položaj kondila, suženje zgl.prostora,

kondila u protektivnom položaju.



- <u>Chr - traumatski</u>

razvija se sporo naprezanjem pri žvakanju, gubitkom grupe zuba, loše proteze. Slabo izražene subjektivne tegobe.

Sinovijalna memb.zadebljala, gruba, smanjene elastičnosti.

Rtg.

Početna artroza kondila kod perforacije diska.

Deformantna artroza koja na kraju dovodi do ankiloze.





- Artropatia - rheumatoid artritis

Acc. proširenje zgl.prostora

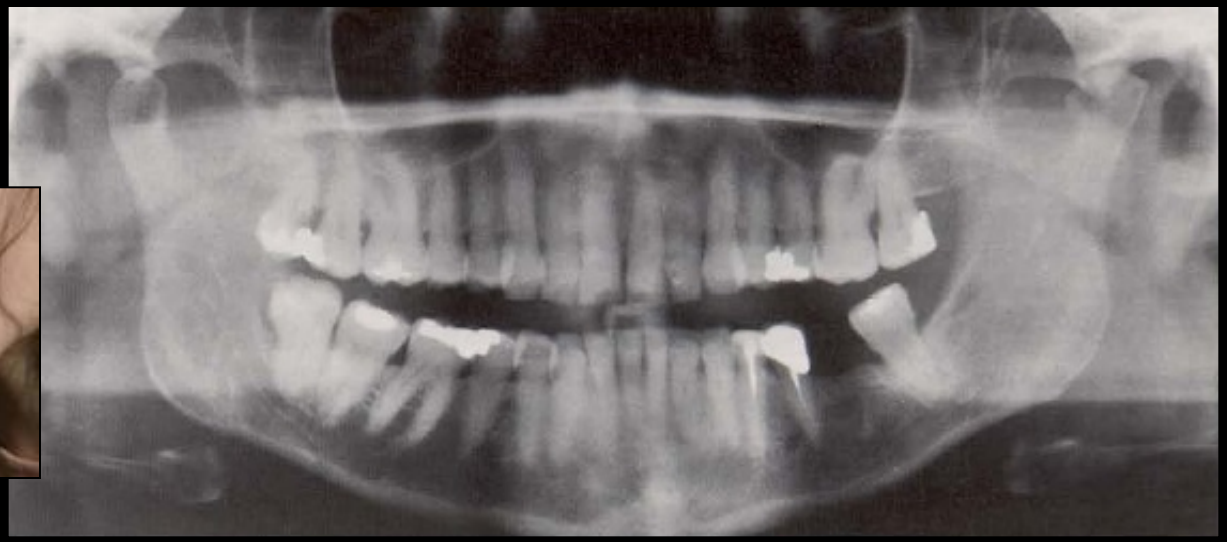
Chr. suženje zgl. prostora do ankiloze

Desni kondil normalne konfiguracije ali pomeren medijalno. Disk u normalnoj poziciji

Levi disk pomeren unapred, kondil pomeren "komprimovan" posteriorno duboko u fosi.

Luxatio





- Jednostrane - traumatske

Intracapsularna fractura condila L, gubitak vertikalne dimenzije i proširenje zgl. prostora. Brada u položaju devijacije na zdravu stranu.

- Obostrane - habitualne

široko otvorena usta, guranje otežano, praznina ispred uha.



- CT-TM zgl. u lat projekciji, prozor za meka tkiva

Perforiran disk pozicioniran anteriorno, kondil pomeren posteiorno pri norm. okluziji.

Pri max. otvorenim ustima kondil u poziciji art. eminentie dok je disk blokiran.

Trizmus

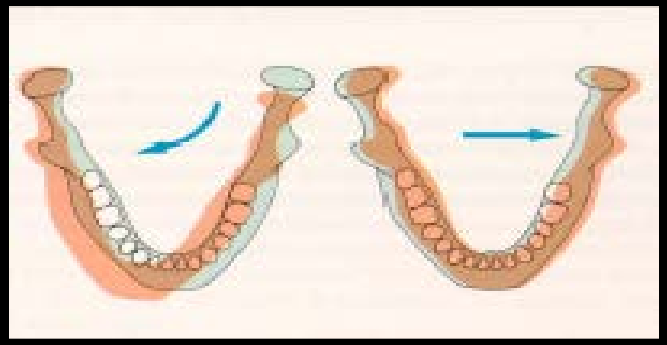
Prolazna nemogućnost otvaranja usta.

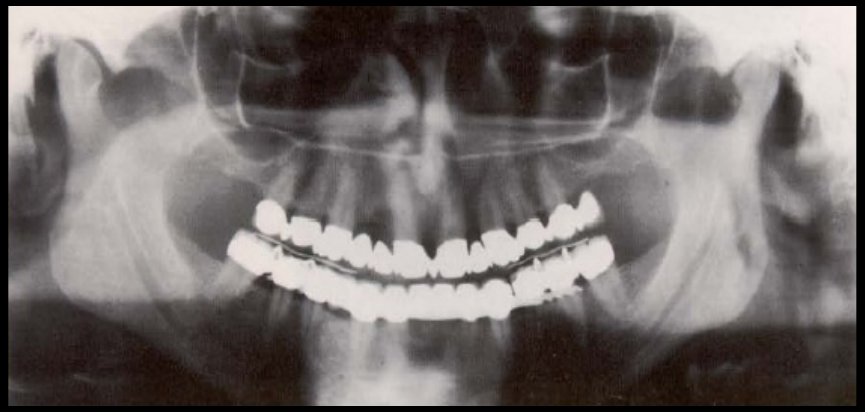
Uzroci:

opšti - tetanus, trovanje strihninom, oštećenje ponsa i medule oblongate

lokalni - perimaksilarne i perimandibularne infekcije odontogenog porekla, peritonzilarne i parafaringealne flegmone, oštećenje mastikatornih mišića.

Sy. Costen





- 1934 g. James Costen

Nedostatak lat. grupe zuba sa jedne strane i poremećena vertikalna dimenzija lica dovodi do poremećaja TM zglobova i slušnog aparata usled čega nastaje skup simptoma.

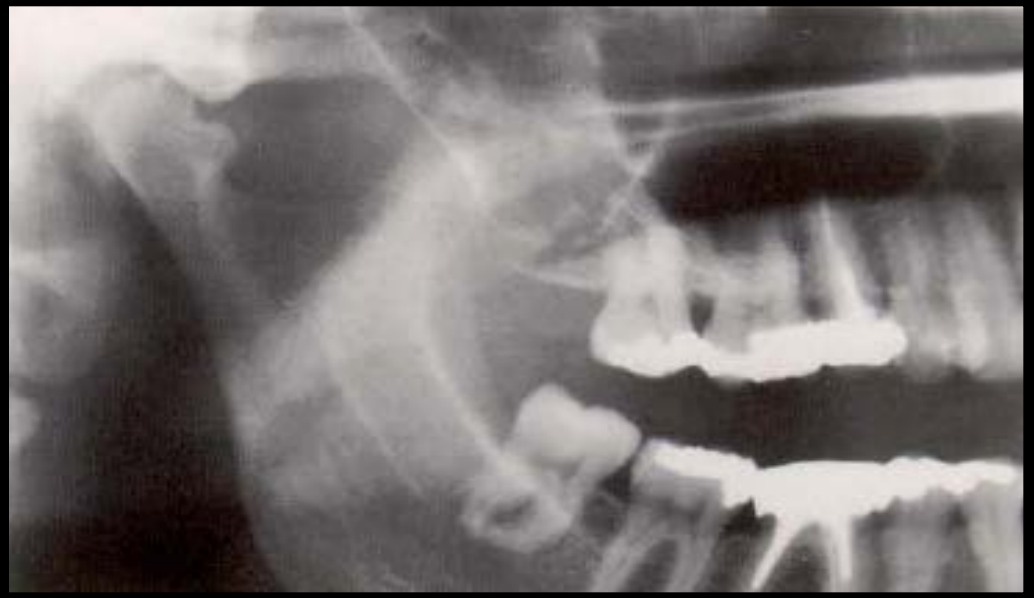
(Glavobolja, pucketanje, škljocanje, zujanje u ušima zapušenost uva, nemogućnost otvaranja i zatvaranja usta, ograničeno kretanje mandubule)

Protetsko zbrinjavanje do gubitka mnogih simptoma

Osteochondroma



Exostosa na anteriornoj konturi zglobne površine.





http:// www.med.pr.ac/katedra/interna-medicina.php
e-mail: nikolicsimon@ikomline.net