



Implant Dentistry: An Overview for the General Dentist

**Presented by
Dr. Hanadi Sabban
KAAU, Jeddah, KSA**

Implant Dentistry: An Overview for the General Dentist

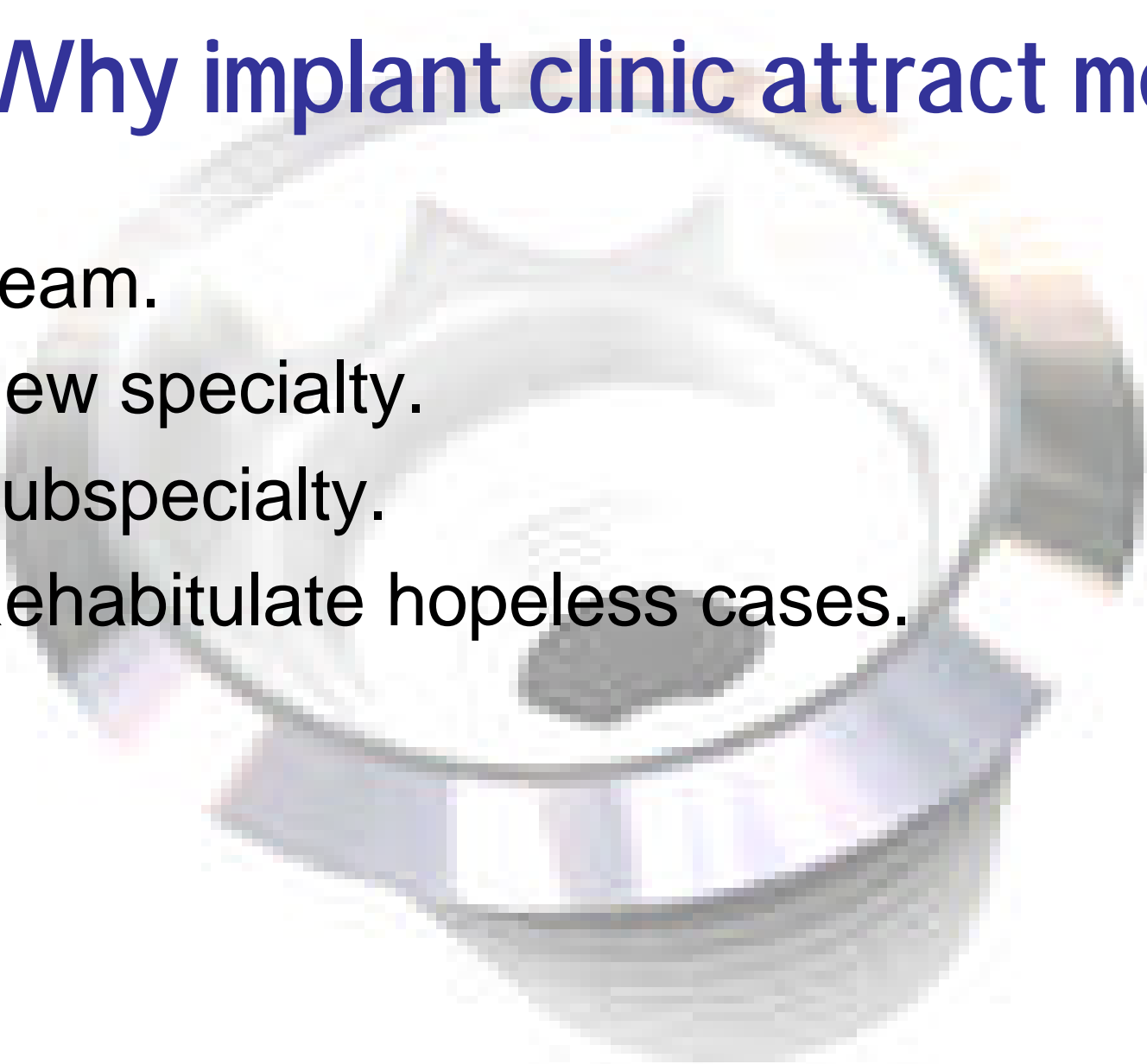
- 💡 Introduction.
- 💡 Implant components & biology.
- 💡 Clinical aspect:
 - Diagnosis and treatment plan.
 - Common questions about implant selection.
 - Clinical procedure.
- 💡 Success versus failure.
- 💡 message !!

What is the best treatment



Why implant clinic attract me?!!

- ✓ Team.
- ✓ New specialty.
- ✓ Subspecialty.
- ✓ Rehabilitate hopeless cases.



What a general dentist should know about Implant?!!!!

Deal with extraction →

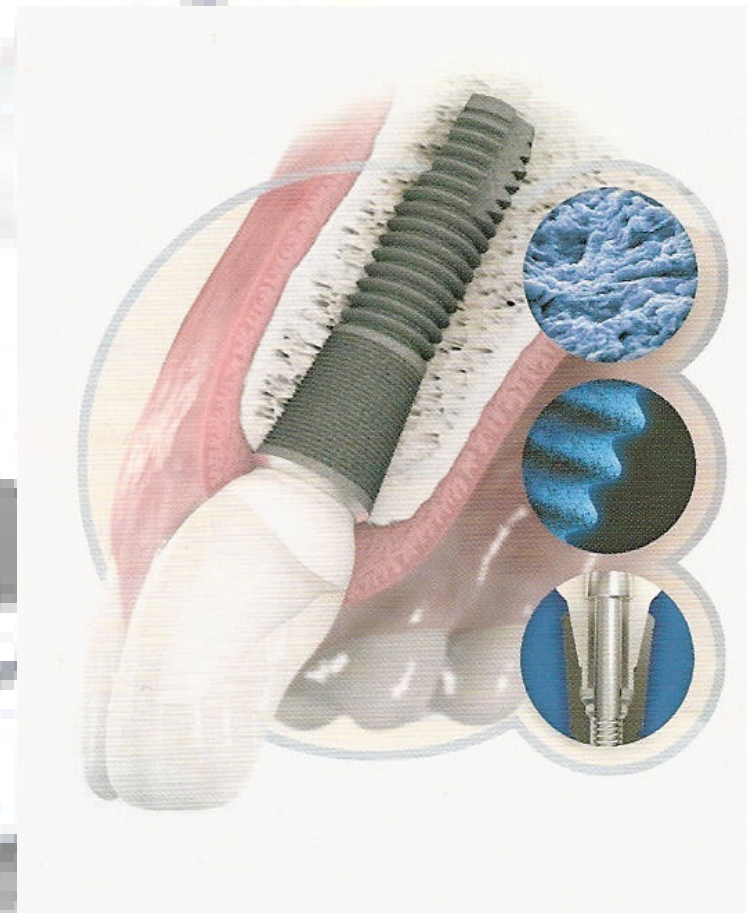
Prepare the patient →

Referral to implantologist

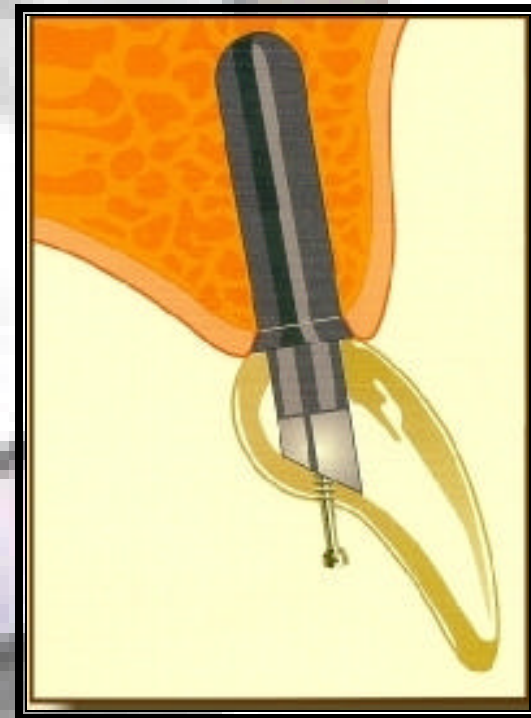
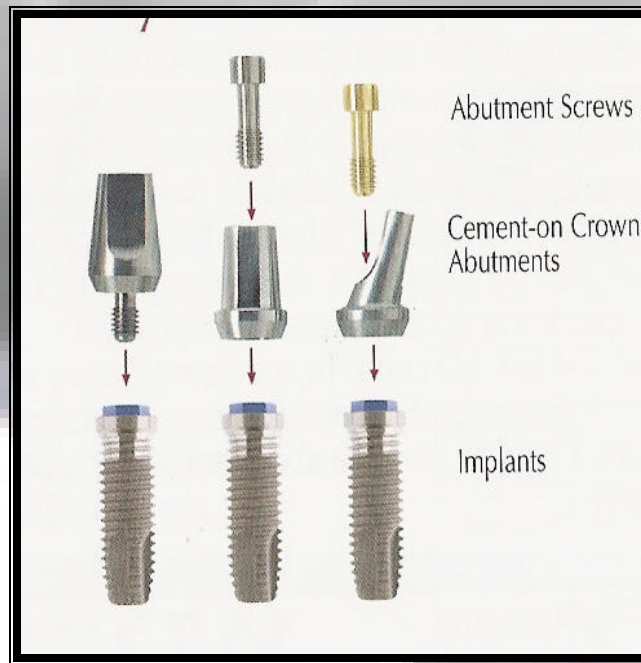


Dental Implant

- 1952, Swedish orthopedic surgeon **Ingvar Branemark**.
- **A dental implant** is an artificial tooth root that a dentist or oral surgeon places into a jaw to hold a replacement tooth or bridge.



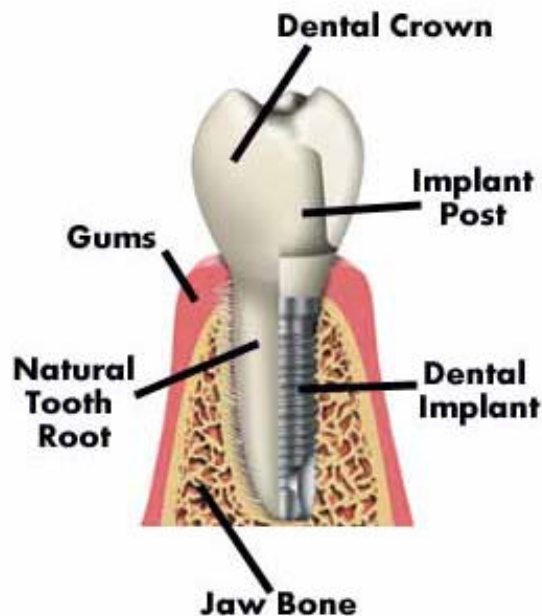
Implant Components



Biological Aspect (Histology & Anatomy)

Osseointegration:

Direct structural and functional connection between ordered, living bone and the surface of a load carrying implant.



- **Mucosal tissue around implant** consists of dense collagenous lamina propria covered by stratified squamous ker. Epi.
- **Junctional epi.** Attach by hemidesmosomes.
- **Sulcular epithelium:**
 - ✓ Depth 1.5-2 mm.
 - ✓ continue apically with junctional epithelium.
- **Less vascularity.**
- **Collagen fibers** run parallel to Implant Surface.

Clinical Aspect

Indication & contraindication..



Chief Complain!

Case selection!

Diagnosis!

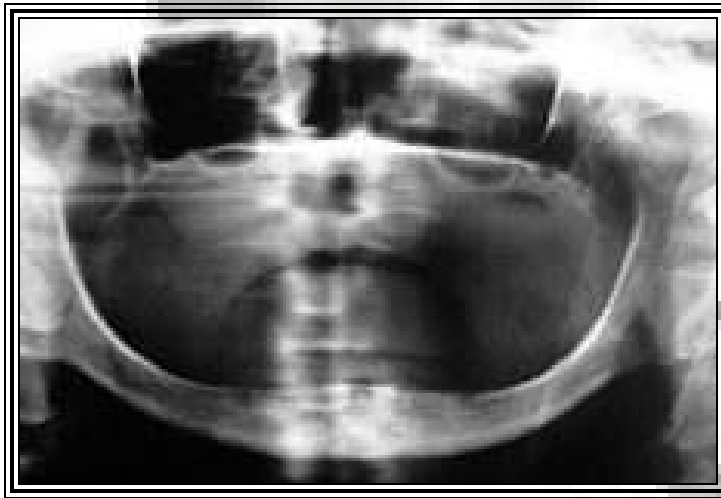
Treatment plan!

Diagnosis and treatment plan

Extra & intraoral examination.

Radiograph: PA, panorama,& CT scan (ideal).

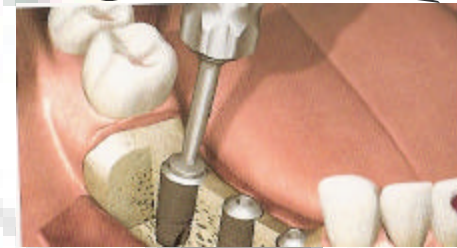
Diagnostic casts → space analysis, diagnostic wax up & for surgical guide.



Diagnosis and treatment plan

- Patient desire.
- Smile line and esthetic.
- Oral Hygiene.
- Age*.
- Bone quality and quantity. (bone height, width BL,MD , & bone type*)
- Analyze the anatomy of vital anatomical structures. (maxillary sinus, mandibular canal & mental nerve)
- Tissue thickness. (Bone mapping)
- Condition of remaining/opposing dentition. (implant/implant or implant/tooth support !!)
- Interarch space.
- Occlusion/ bruxer or smoker.

one stage or two stages implant surgery?



Advantages of one stage:

- 1-mucogingival management is easier.
- 2-patient comfort.
- 3-esthetic easier.

Advantages of two stage:

***Vertical bone augmentation is necessary.**

Objectives of second stage are:

- 1- expose the submerged implant without damaging the surrounding bone.
- 2-shallow sulcus.
- 3-preserve or create attached ker, tissue around the implant.
- 4-ensure proper abutment seating.
- 5-facilitate OH.

Placement, loading!!!

💡 Placement:

- ✓ Immediate.
- ✓ Delayed immediate.
- ✓ Delayed.

💡 Loading:

- ✓ Immediate
- ✓ delayed

Common questions

What is the best type of fixture?

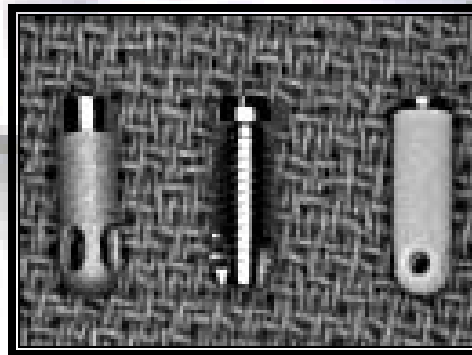


Connection:

- External.
- Internal.



Surface texture (increase surface area).



What is the best type of fixture?



Form:

cylindrical.
root form.

Implant \ SLA	6.0 mm	8.0 mm	10.0 mm	12.0 mm	14.0 mm	16.0 mm
Standard Implant Ø 3.3 mm RN*		043.131S	043.132S	043.133S	043.134S	043.135S
Standard Implant Ø 4.1 mm RN*	043.030S	043.031S	043.032S	043.033S	043.034S	043.035S
Standard Implant Ø 4.8 mm RN*	043.230S	043.231S	043.232S	043.233S	043.234S	
Standard Implant Ø 4.8 mm WN*	043.630S	043.631S	043.632S	043.633S		

Implant \ SLA	6.0 mm	8.0 mm	10.0 mm	12.0 mm	14.0 mm	16.0 mm
Tapered Effect Implant Ø 3.3 mm RN*		043.721S	043.722S	043.723S	043.724S	
Tapered Effect Implant Ø 4.1 mm RN*		043.761S	043.762S	043.763S	043.764S	
Tapered Effect Implant Ø 4.8 mm WN*			043.712S	043.713S	043.714S	

How could I select the prosthesis part & the abutment type

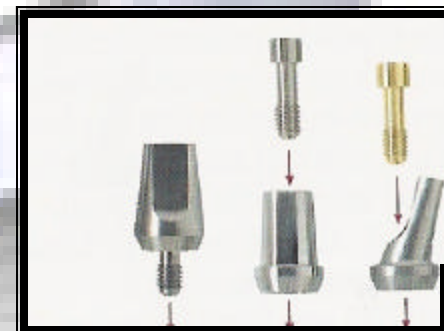
- **Prosthesis type:**

- Implant supported FPD.
- Implant supported over-denture.
- Implant supported hybrid denture.

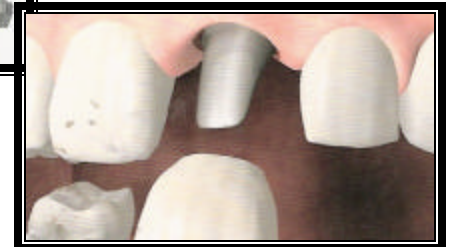


- **Type of abutment:**

- Stock (straight, angled).
- Custom.
- Preparable.



- **Screw versus cemented!**

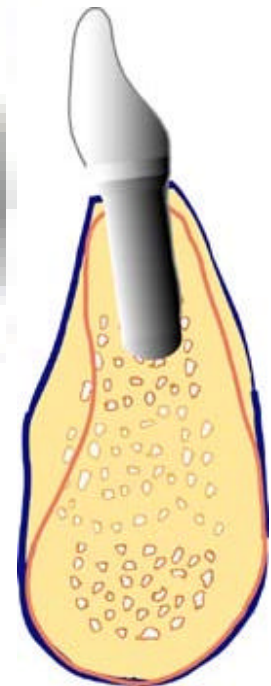
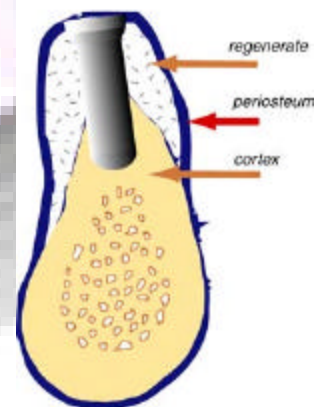
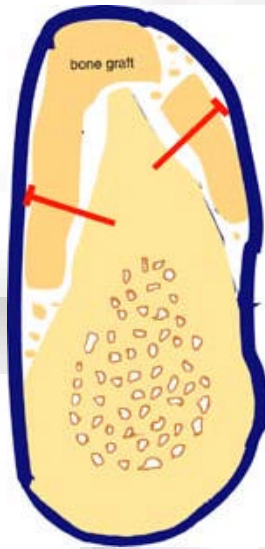


Do we need advanced surgery?

**Bone graft & sinus lift
versus
distraction osteogenesis!!**

Common
Question

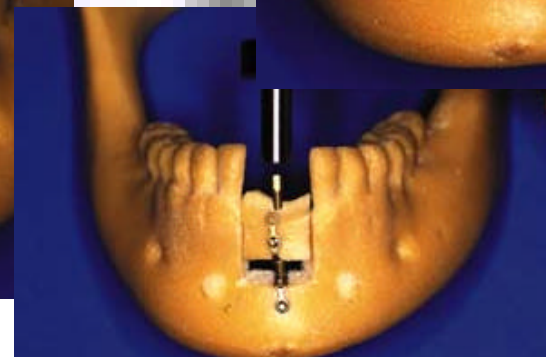
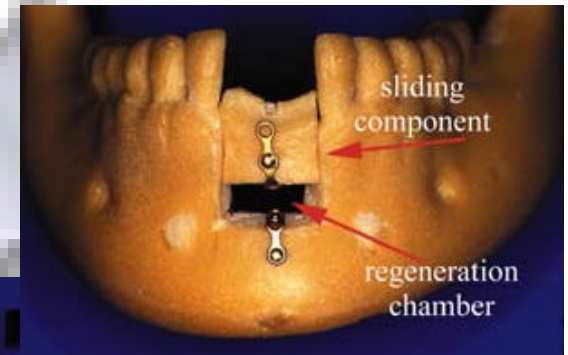
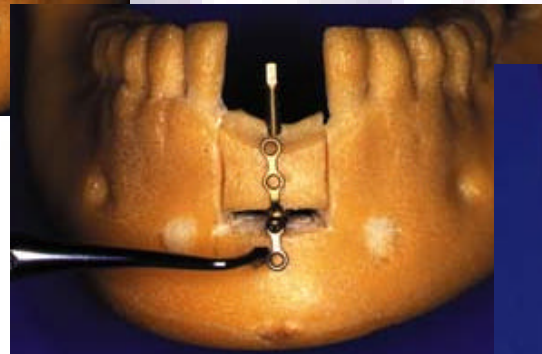
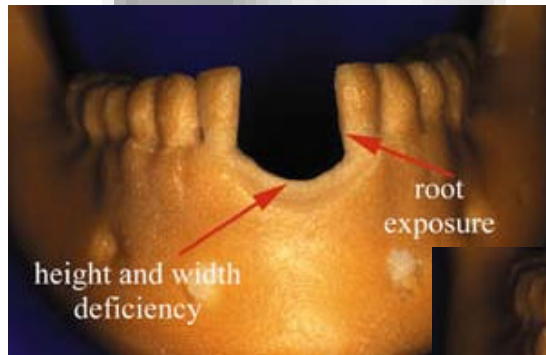
Bone Graft



Bone Graft



Distraction Osteogenesis



Clinical procedure



1. Diagnostic stage

- Prosthetic
- Surgical

2. Surgical:

- ✓ one stage .
- ✓ two stage .

3. Prosthetic:

- Impression procedure.
- Jaw relation registration.
- Try-in metal.
- Bisque try-in*.
- Prosthesis insertion.
- OH measures.

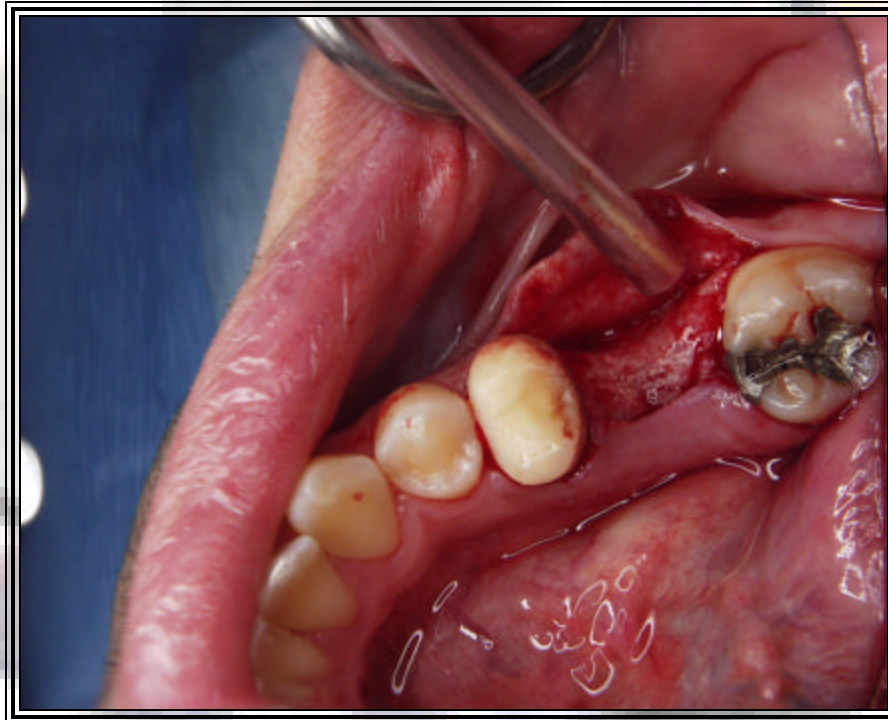
Case I

Two Stage Surgery



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Two Stage Surgery



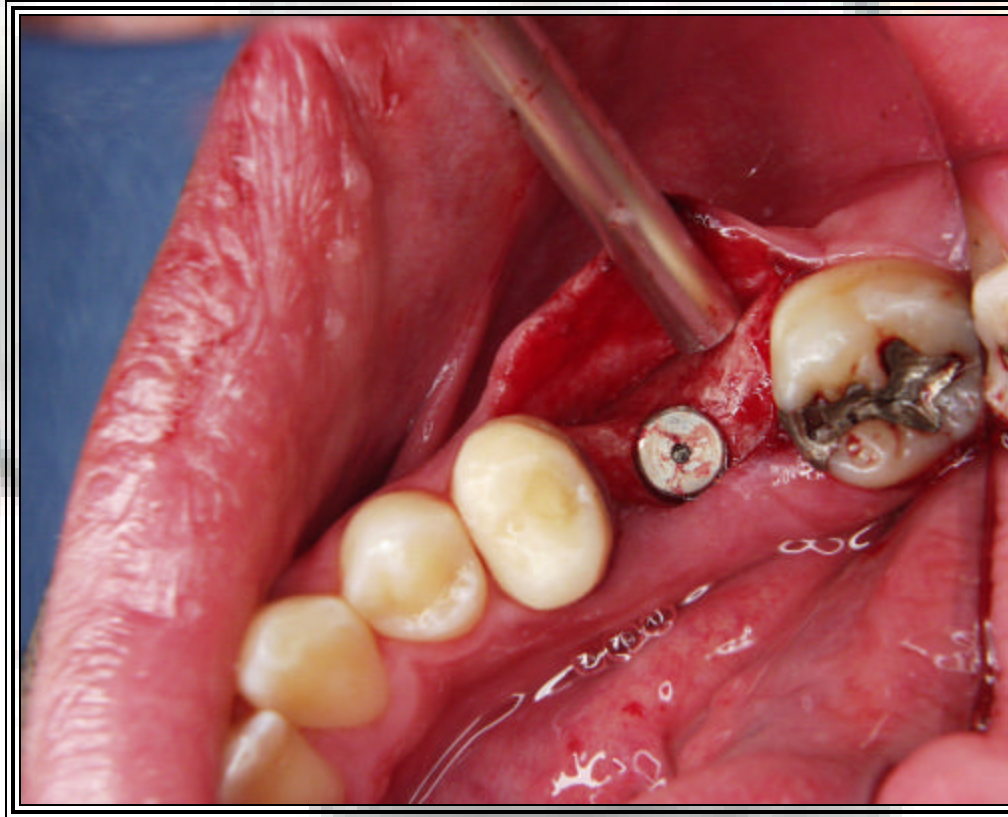
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Two Stage Surgery



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Two Stage Surgery



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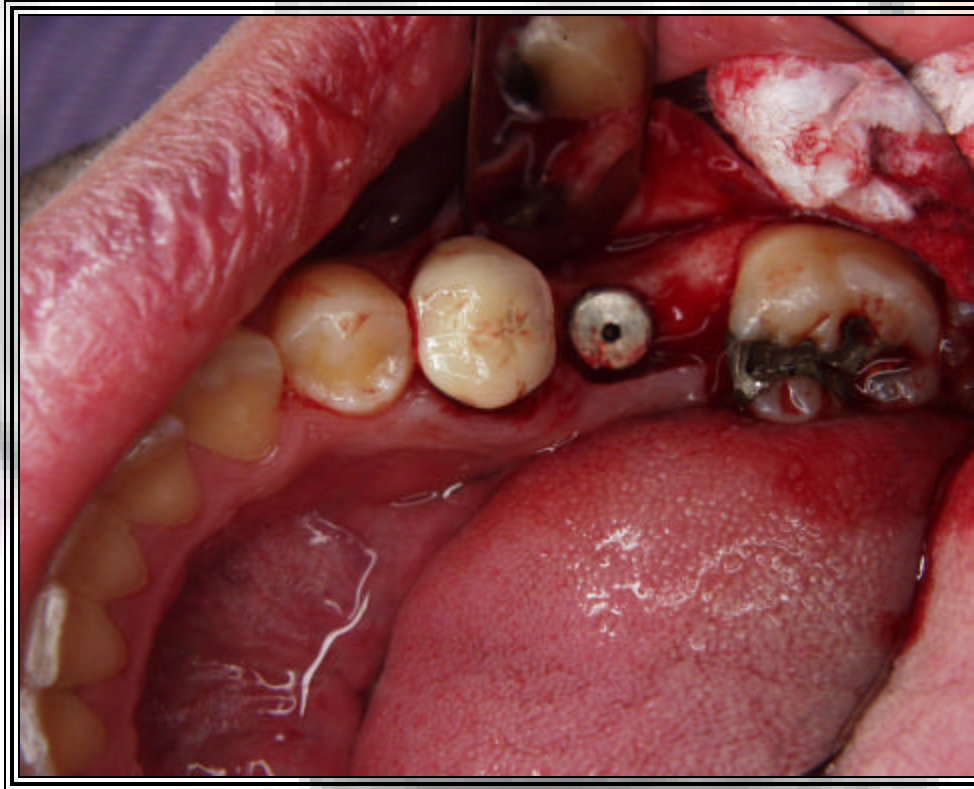
Two Stage Surgery



3 months later from stage I

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Two Stage Surgery



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Two Stage Surgery

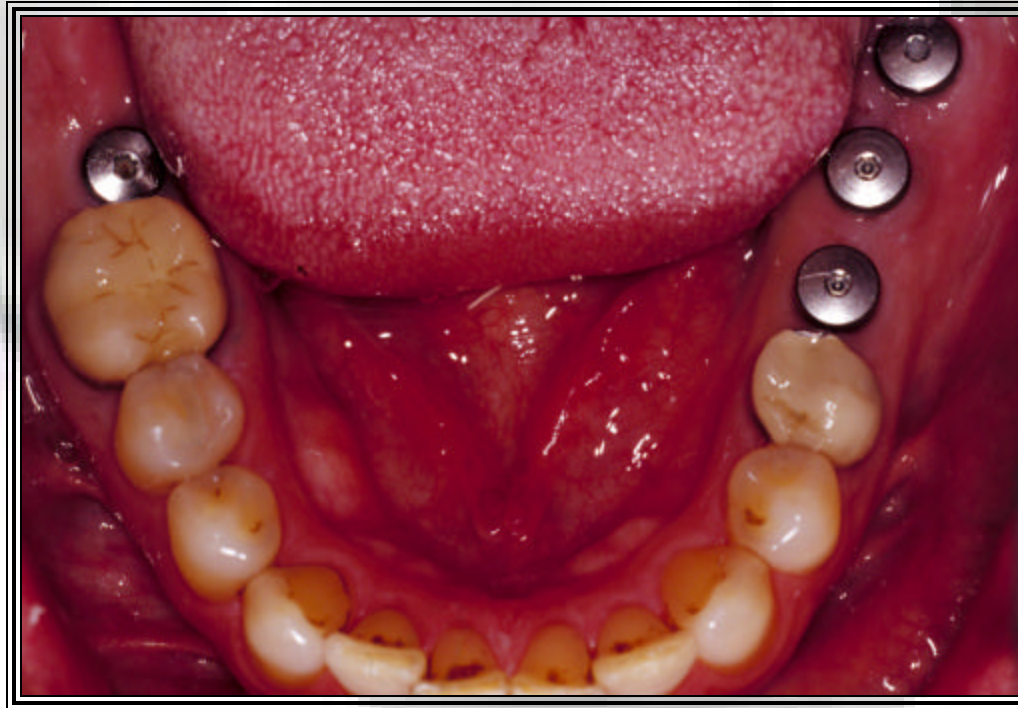


PFM cement type with custom abutment

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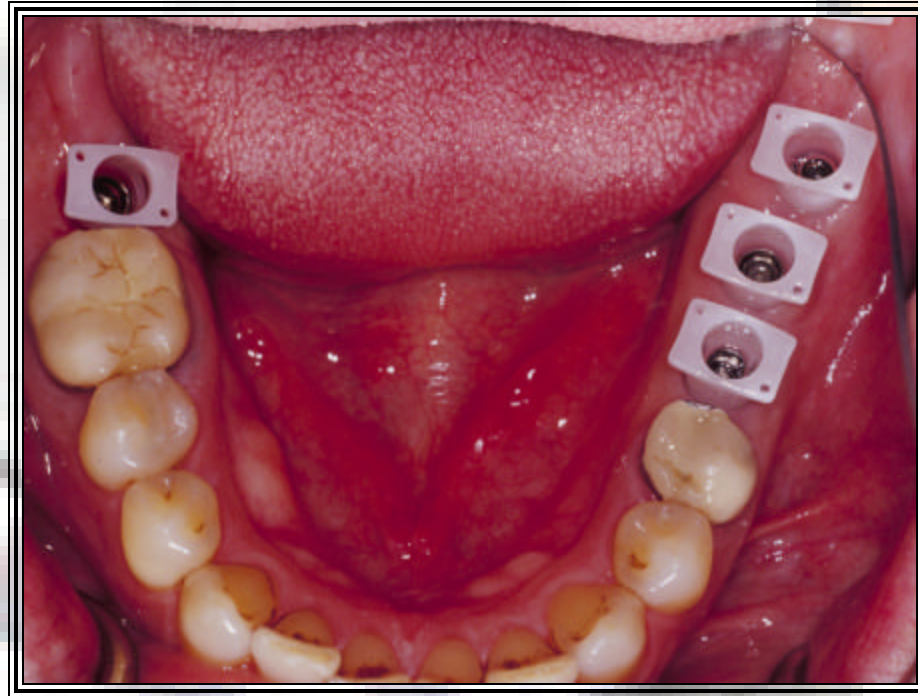
Case II

Prosthetic part after one stage implant



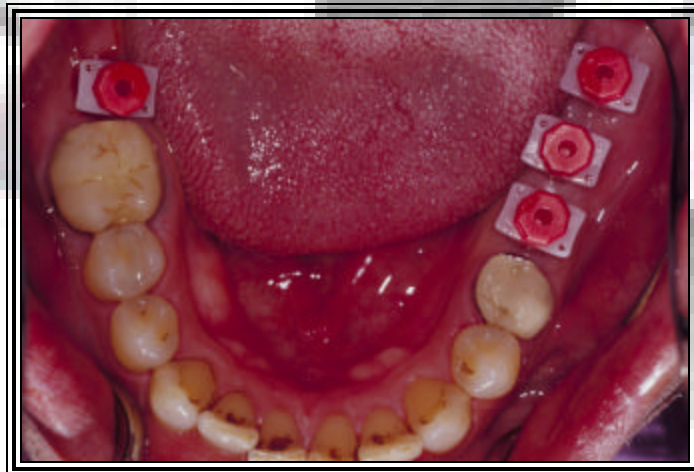
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Prosthetic part after one stage implant



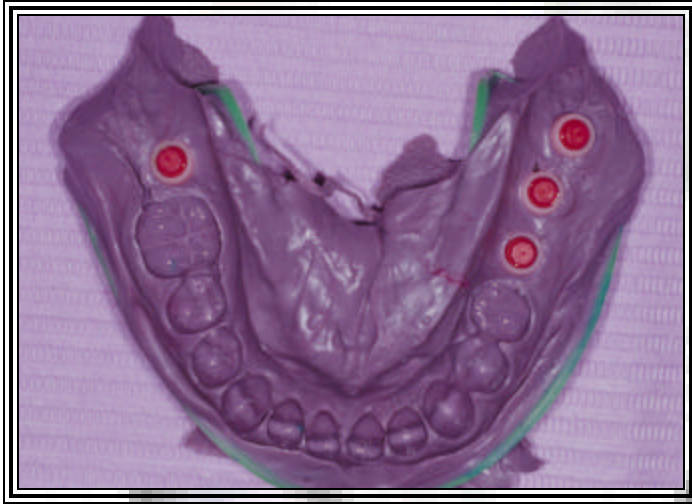
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Prosthetic part after one stage implant



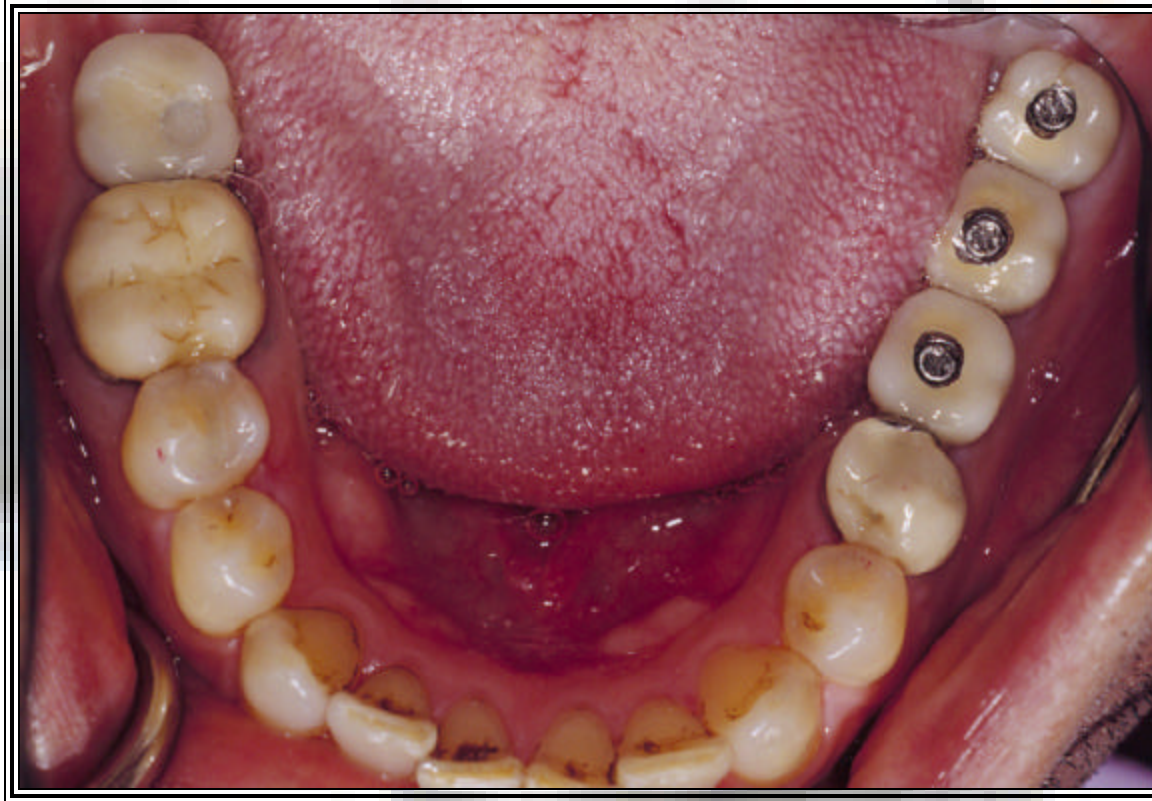
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Prosthetic part after one stage implant

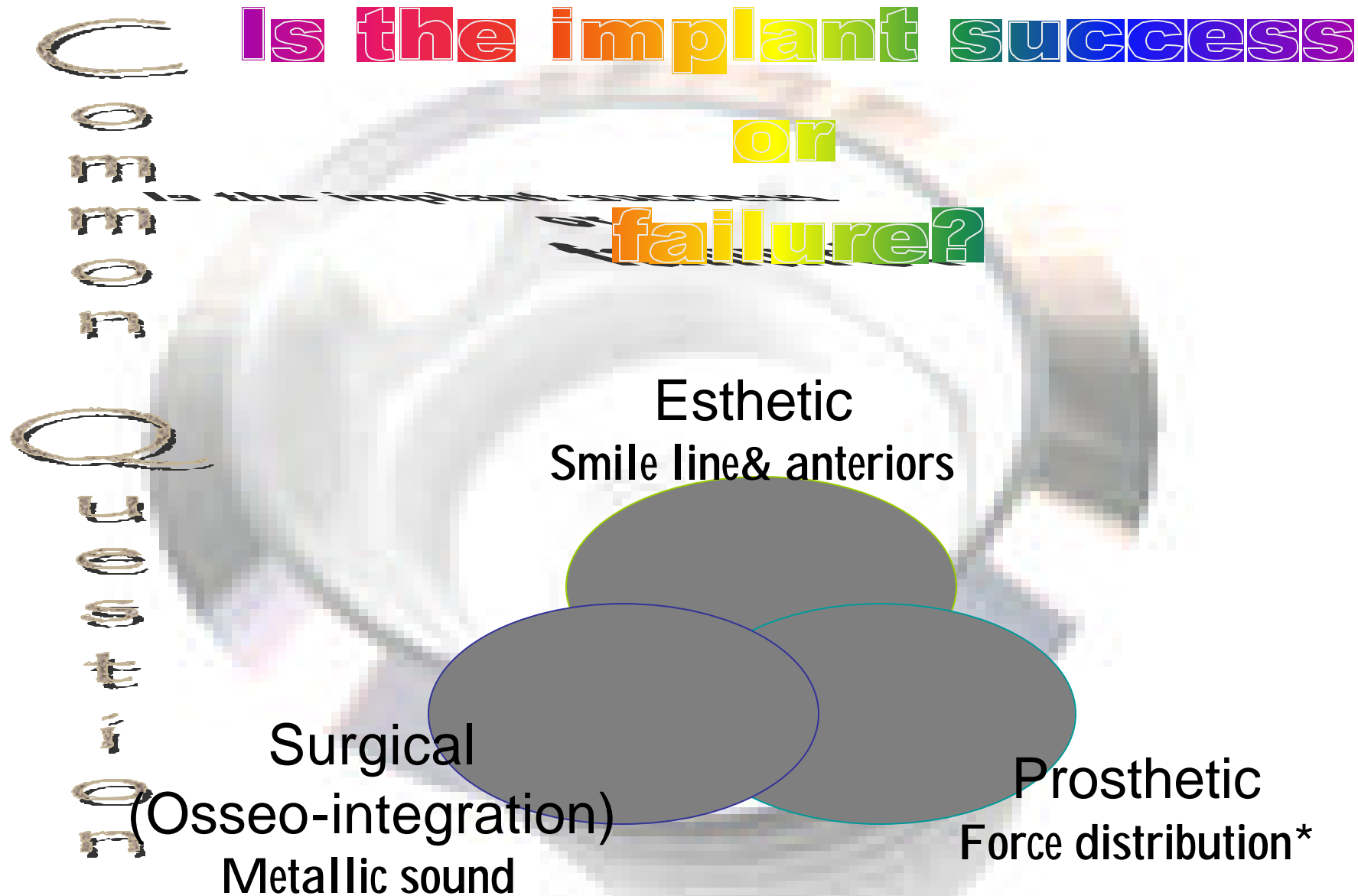


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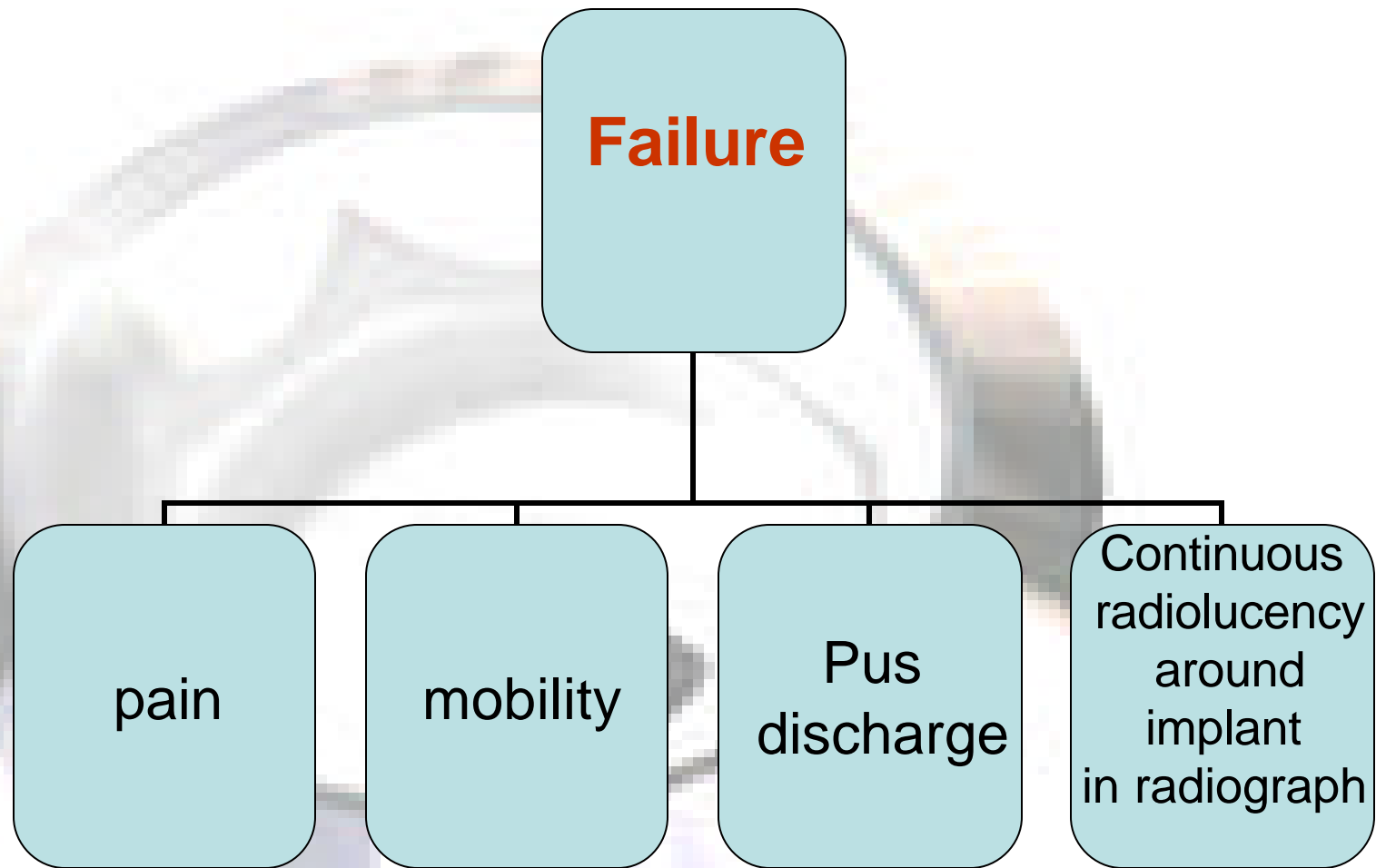
Prosthetic part after one stage implant



Dr. Moh. Al-Garni



Common
causes



Peri-implantitis

Treatment of peri-implantitis

- **Initial phase:**

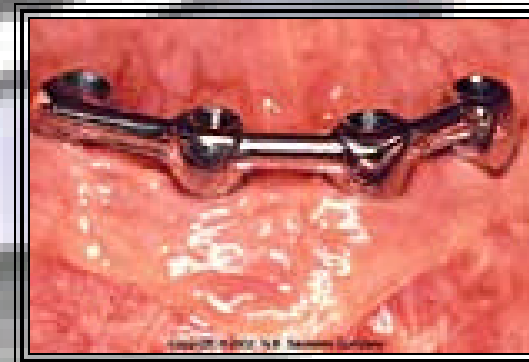
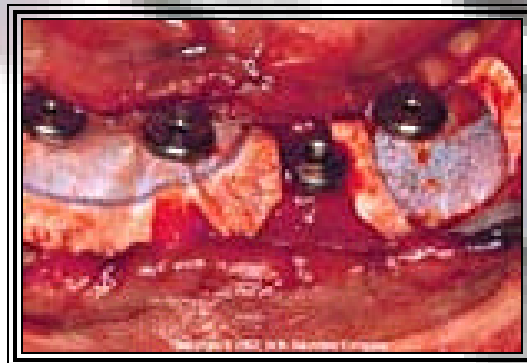
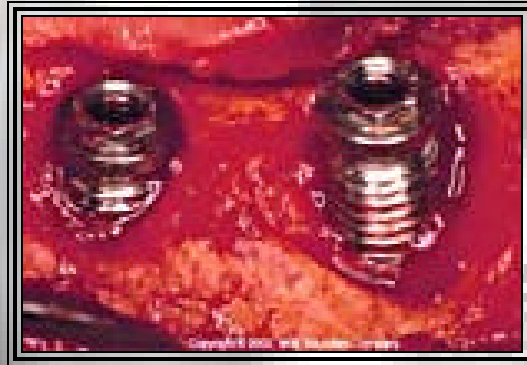
- 1-Occlusal therapy.
- 2-Anti-infective therapy.

- **Surgical phase:** (osseous defect, bone loss, possibility of detoxification of implant surface & position)

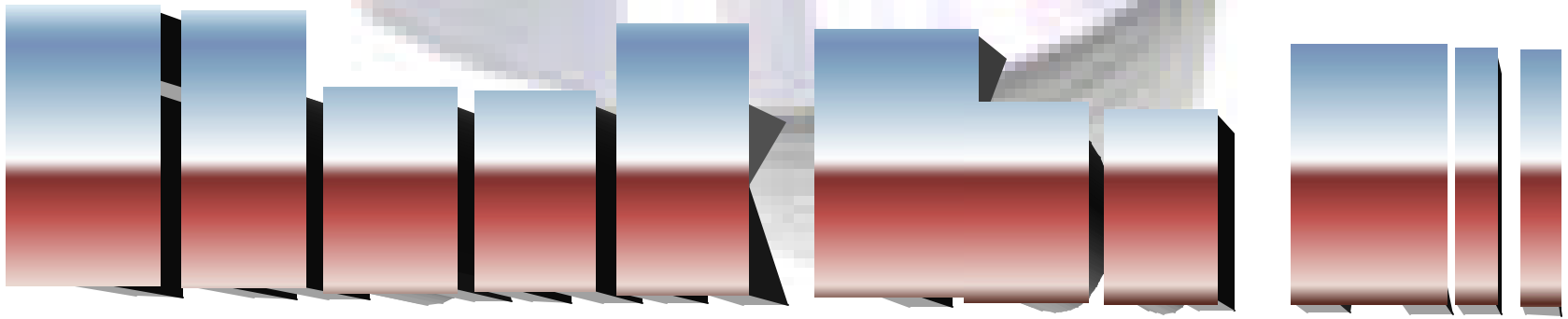
- 1-periimplant resective therapy.
- 2-surface polishing/implantoplasty.
- 3-periimplant regenerative therapy.

- ***Explantation.**

Treatment of peri-implantitis by GBR



lets make implant our first decision if possible pos



References

- Clinical periodontology, Carranza, 9th edition, W.B. Saunders Co. 2002
- E. McGlumby, implant supported FP, ch 13
- <http://www.distraction.net>

