Which is better Root Canals or Dental implants?

Edwin Babadjanian DDS

Success?

- Evidence based
- Clinical skills
- Patient satisfaction
- Make the right decision
- Outcome

The Outcome of Endodontic Treatment: A Retrospective Study of 2000 Cases Performed by a Specialist.

Imura, Pinheiro, Gomes, JOE 2007

- Treatment outcome of initial endodontic treatment and nonsurgical retreatment.
- A total of 2,000 teeth were examined clinically and radiographically
- Recall period of 18-24 months
- Overall endodontic success rate was 91.45%
- Initial endodontic treatment, the success rate was 94.0%
- Nonsurgical retreatment sample, 85.9% were successful

Treatment Outcome in Endodontics: The Toronto Study. Phase 1: Initial Treatment

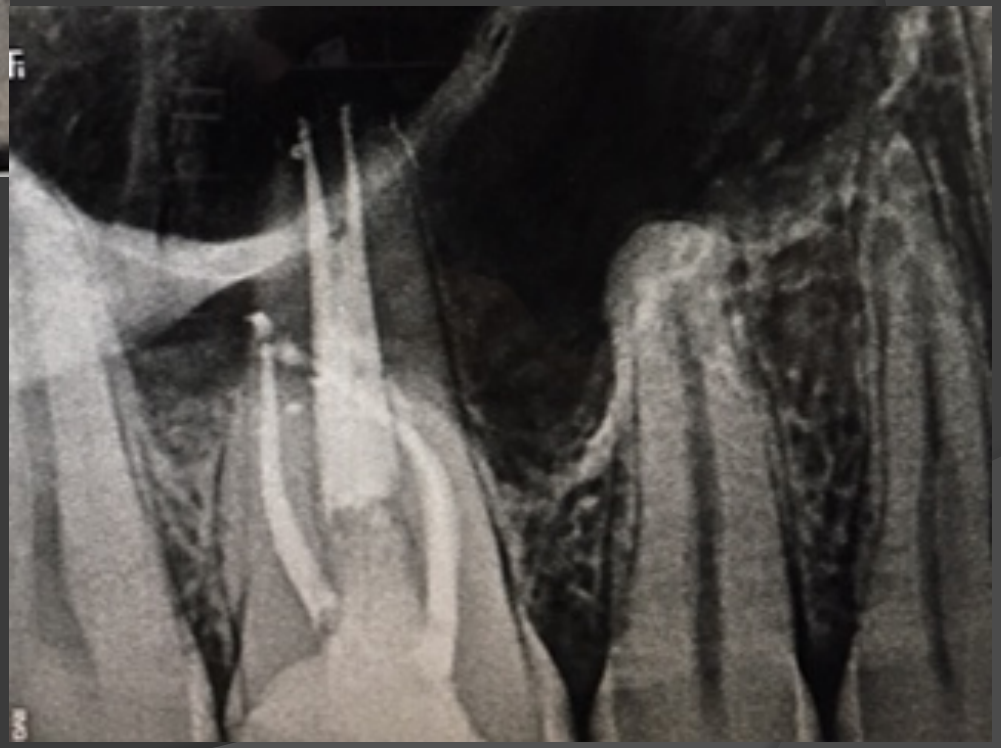
Friedman, Abitbol, JOE 2013

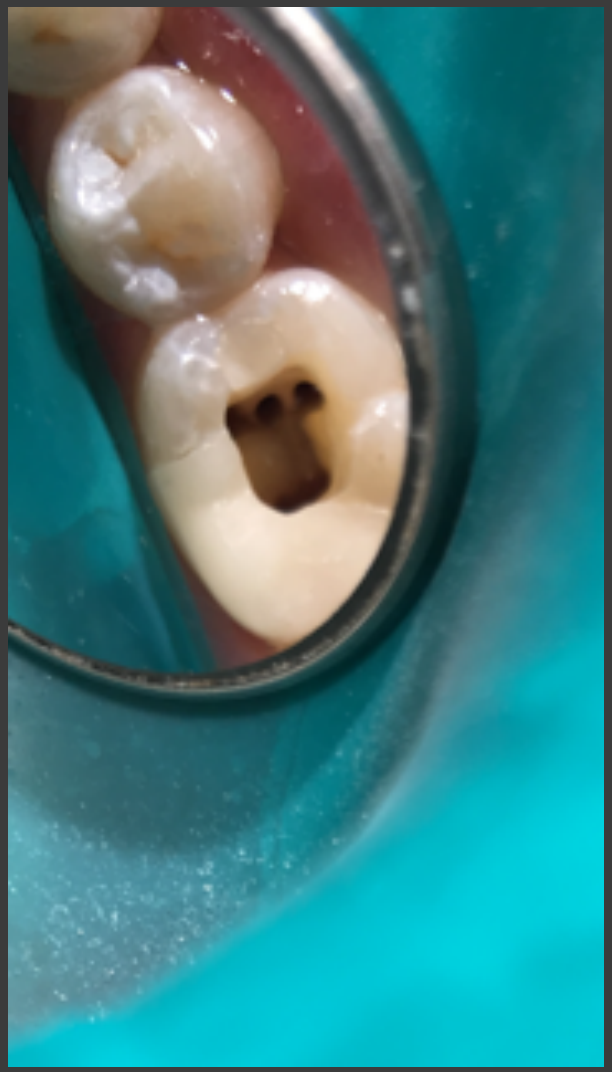
- This study assessed 4 to 6 year outcome
- A total of 450 teeth were treated, examined clinically and radiographically.
- Overall success rate was 81%
- Without apical periodontitis 92%
- With apical periodontitis 74%

Failure of endodontic treatment: The usual suspects.

Tabassum, Eur J Dent. 2016 Jan-Mar; 10(1): 144–147.

- Persistence of bacteria
- Inadequate or overextended root filling
- Improper coronal seal
- Complications of instrumentation
- Untreated Canals

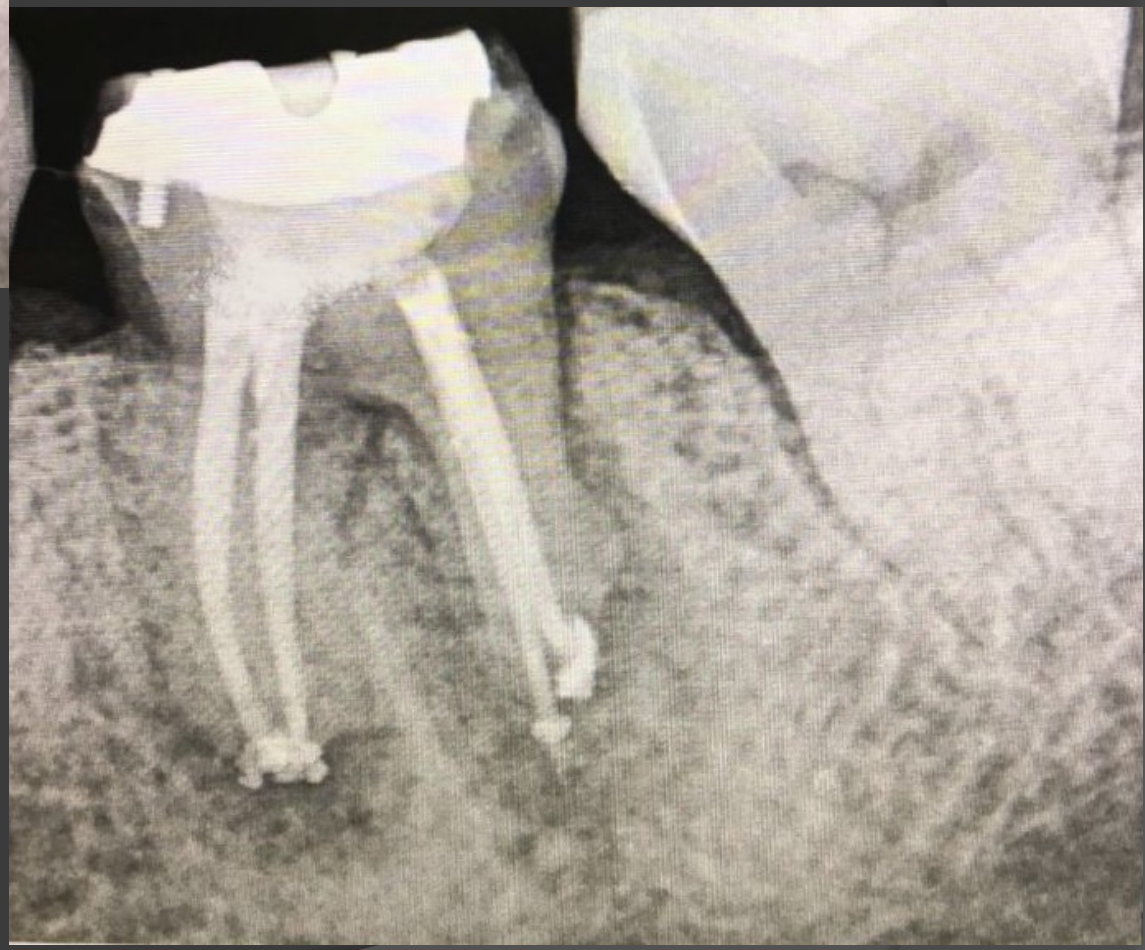




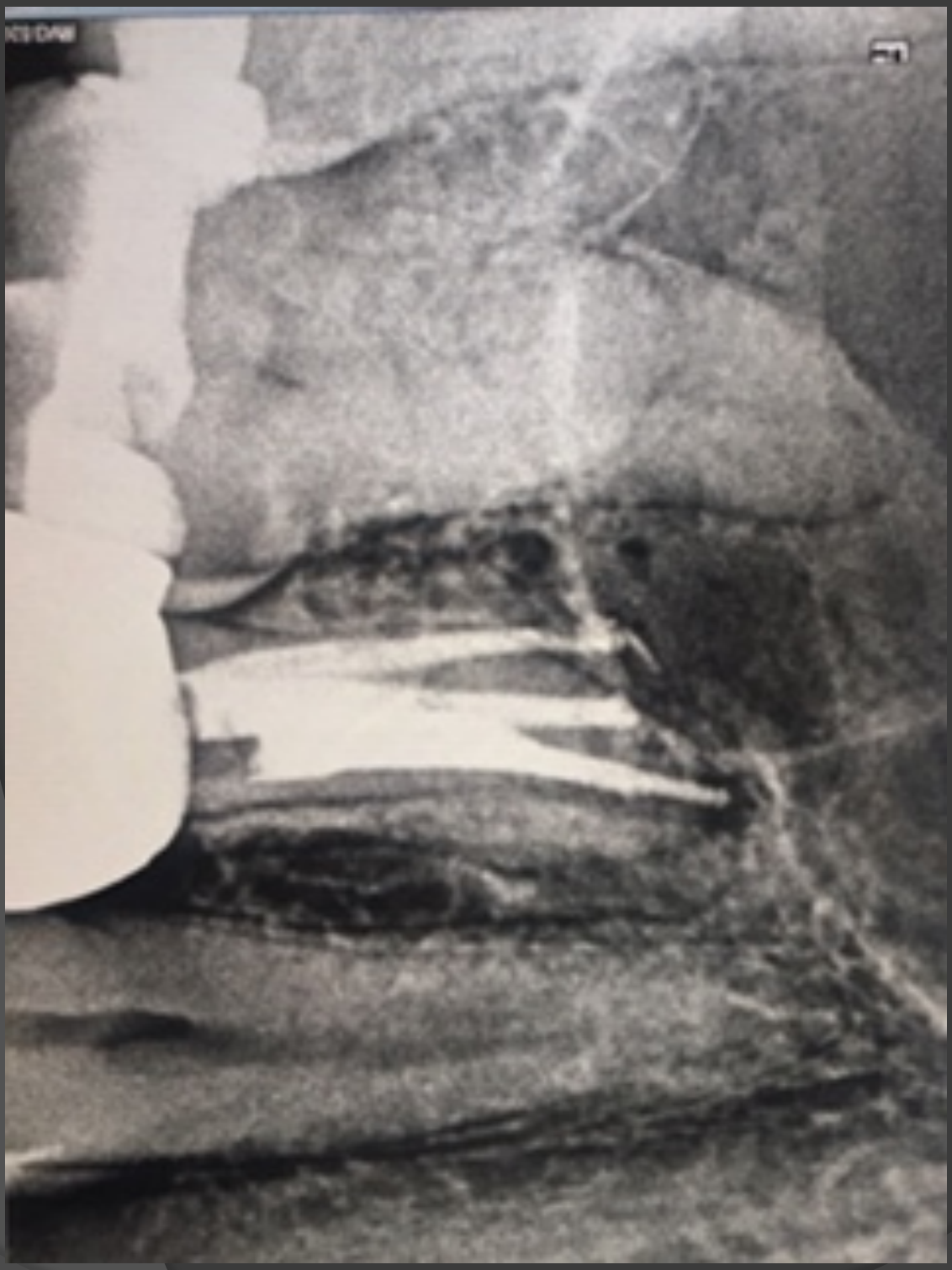
Treatment Outcome in Endodontics: The Toronto Study. Phases I and II: Orthograde Retreatment

Mahsa Farzaneh, DDS, MSc, Sarah Abitbol, DDS, MSc, Shimon Friedman, *J Endod*. 2004;30:627–633

- 523 teeth in 444 patients were retreated 4 to 6 years outcome of retreatment
- “Healed” rate 81% differed significantly for preoperative apical periodontitis (absent, 97%; present, 78%) and perforation (absent, 89%; present, 42%).



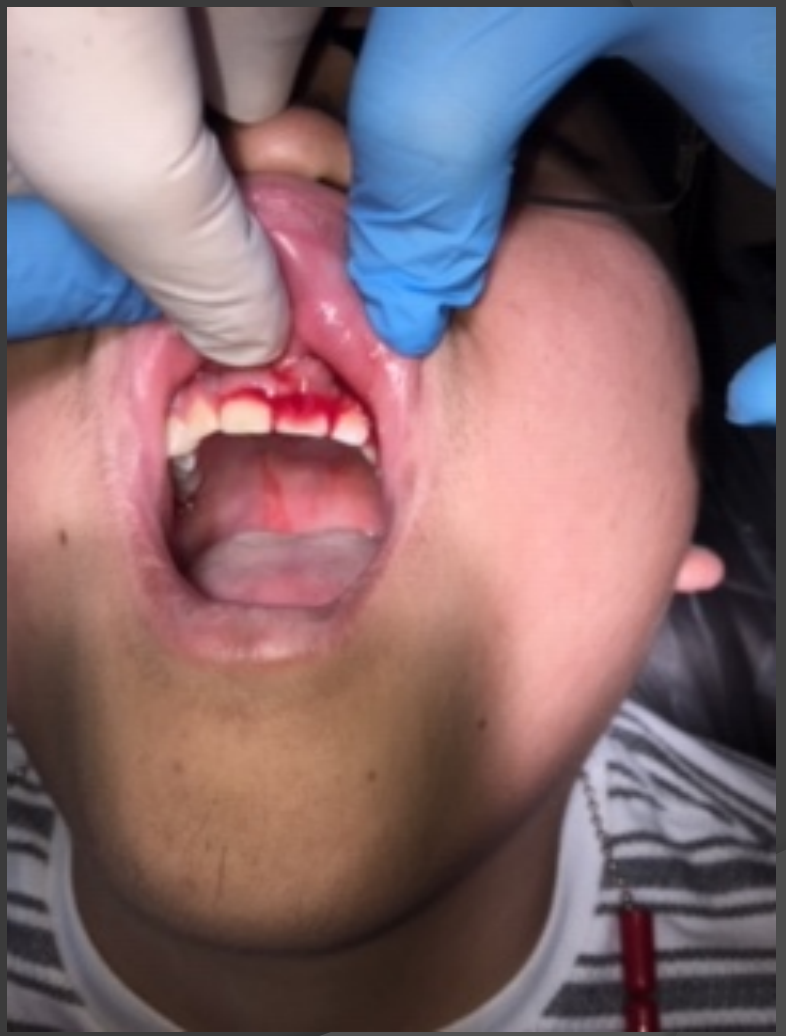
Г

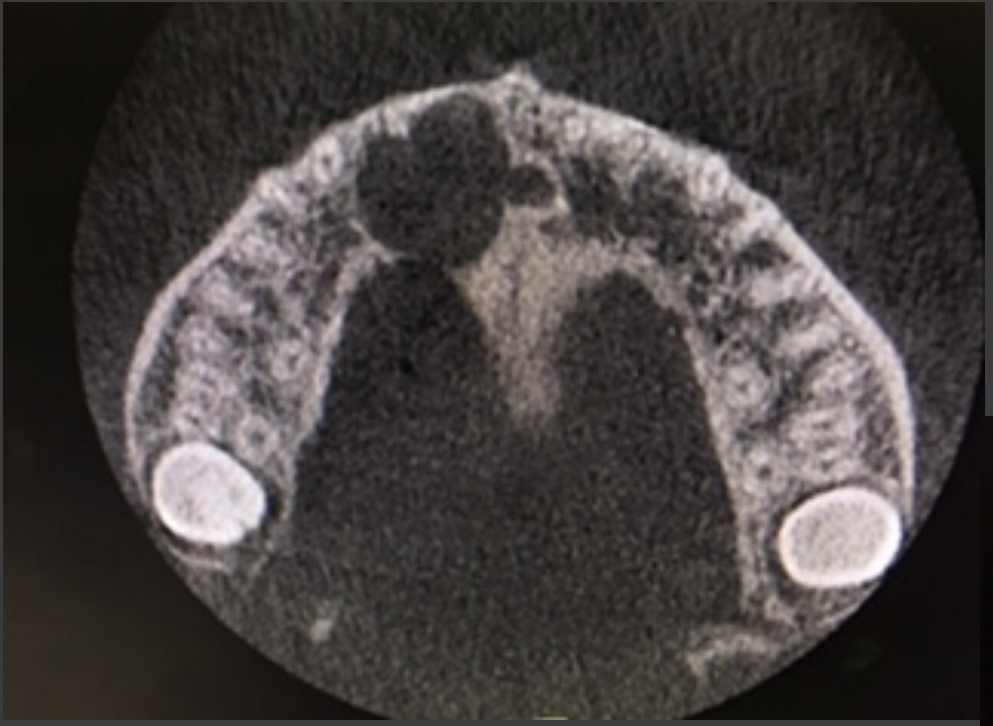


Outcome of Endodontic Surgery: A Meta-analysis of the Literature—Part 1: Comparison of Traditional Root-end Surgery and Endodontic Microsurgery.

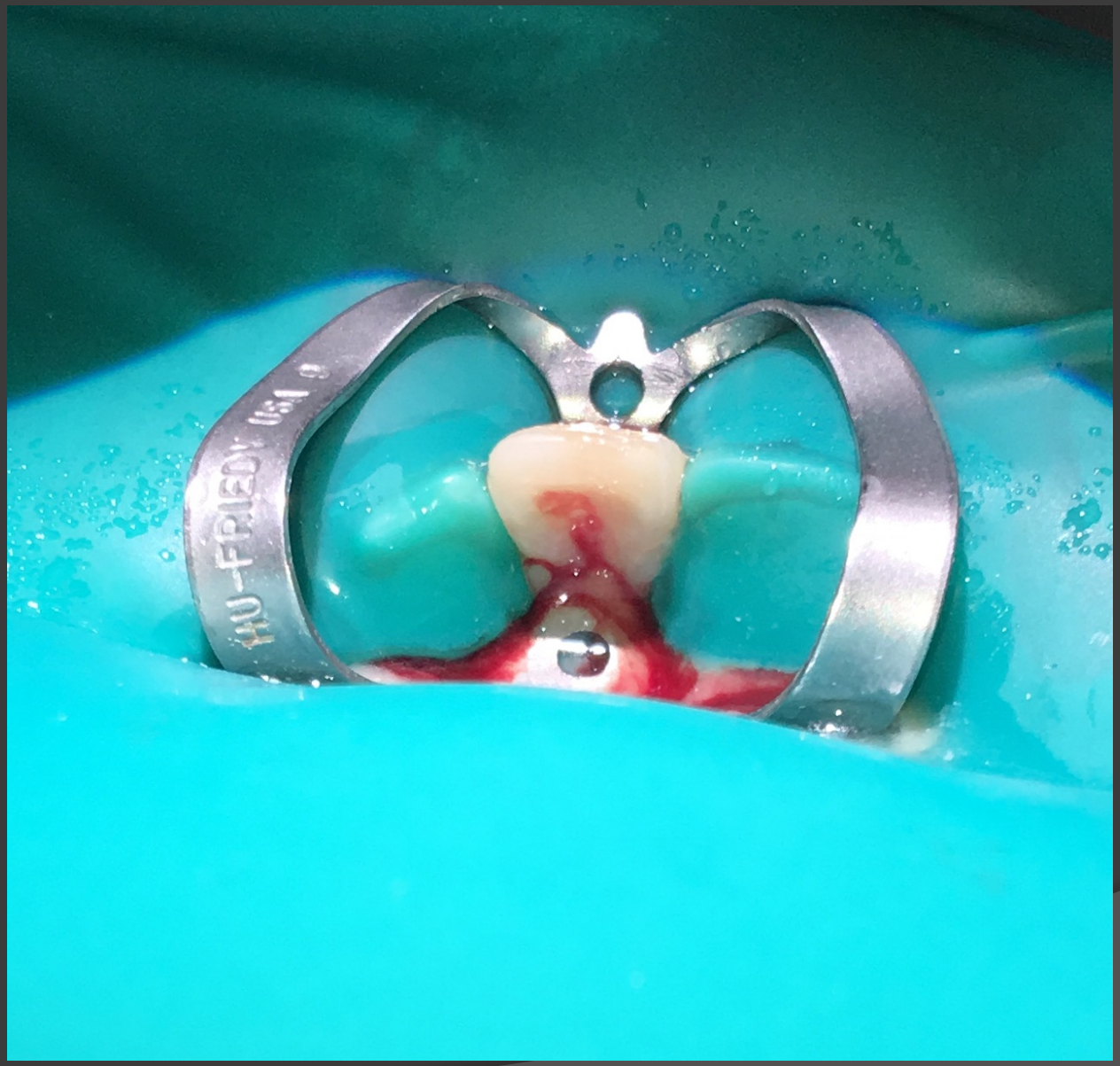
Setzer, Shah, JOE 2010

- Ninety-eight articles were identified and obtained for final analysis
- 59% positive outcome for TRS and 94% for EMS





H


HU-FRIEDY

Implant location and success of dental implants: Literature Review

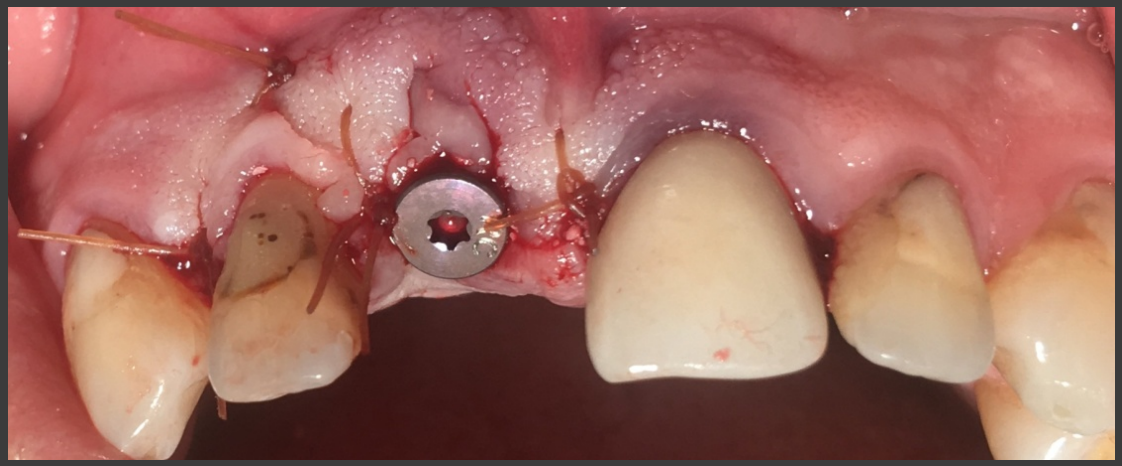
Journal of Oral Implantology. 2007

- Becker and Becker, the 6-year post op, maxillary posterior implants was 82.9%, for mandibular posterior, 91.5%.
- Eckert, Wollan, J Prosthet, location of implants did not appear to have any effect on implant survival.
- Parein, Eckert, The CSR of all implants in the posterior mandible was 89.0% at 6 years
- Drago, observed from 7 months to 8 years following occlusal loading. 89.1% anterior maxilla, 71.4% in the posterior maxilla, 96.7% anterior mandible, and 98.7% posterior mandible.
- Moy, Medina, analyzing implant failure rates, 8.16% in the maxilla (91.84%) and 4.93% (95.07%) in the mandible.
- Bass,Triplett, maxilla at 93.4% and 97.2% in the mandible.

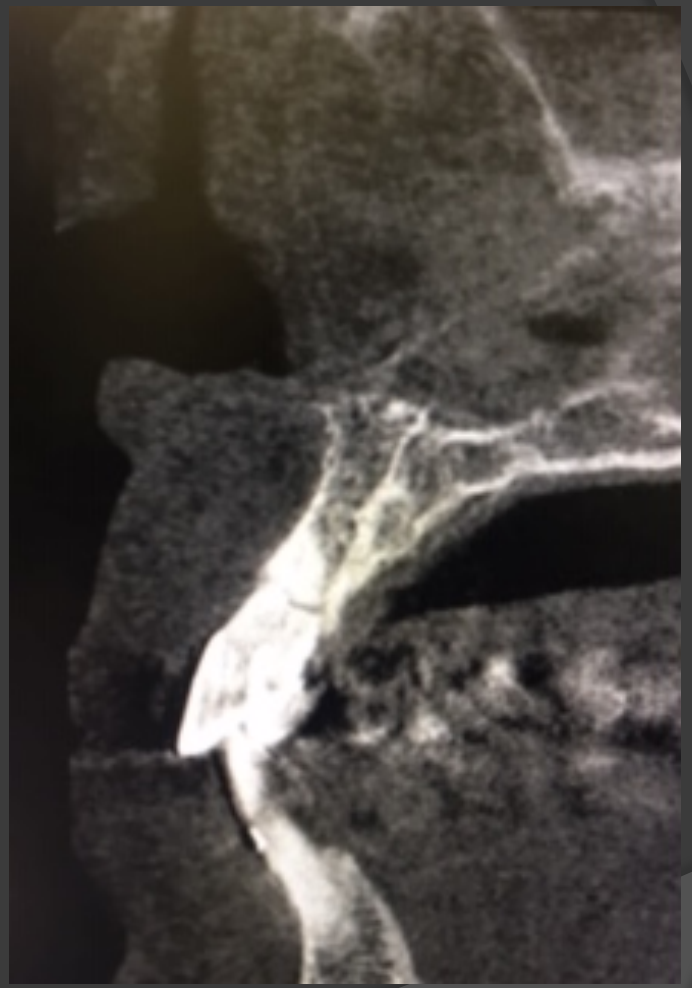
Factors associated with early and late failure of dental implants

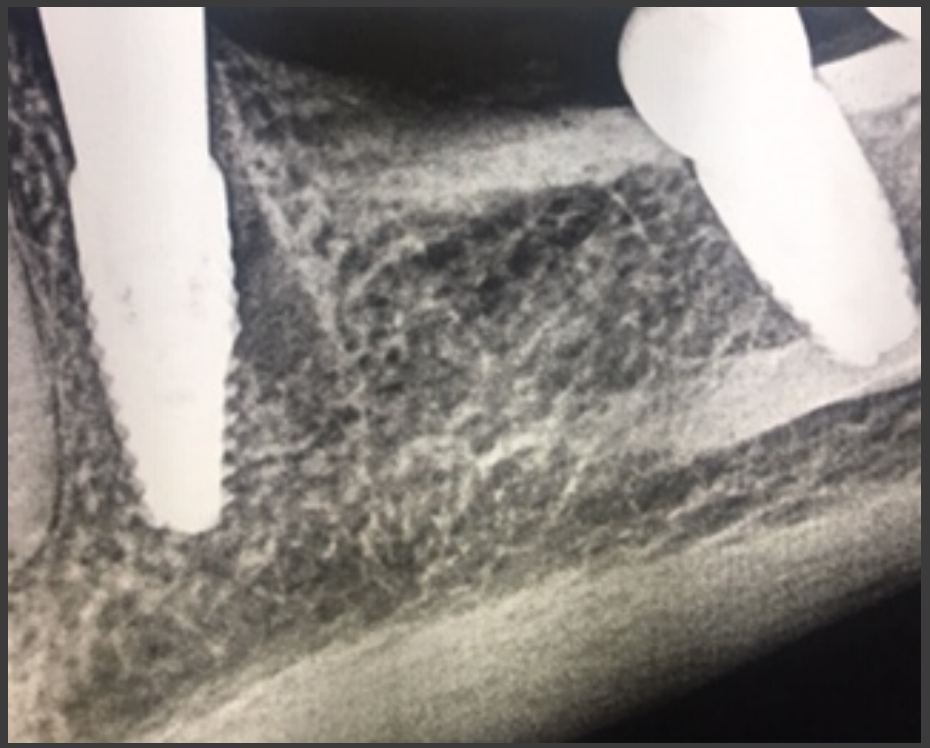
Sakka, Baroudi, Nassani. Journal of Investigative and Clinical Dentistry (2012)

- A lack of primary stability, surgical trauma, and infection seem to be the most important causes of early implant failure.
- Occlusal overload and periimplantitis seem to be the most important factors associated with late failure



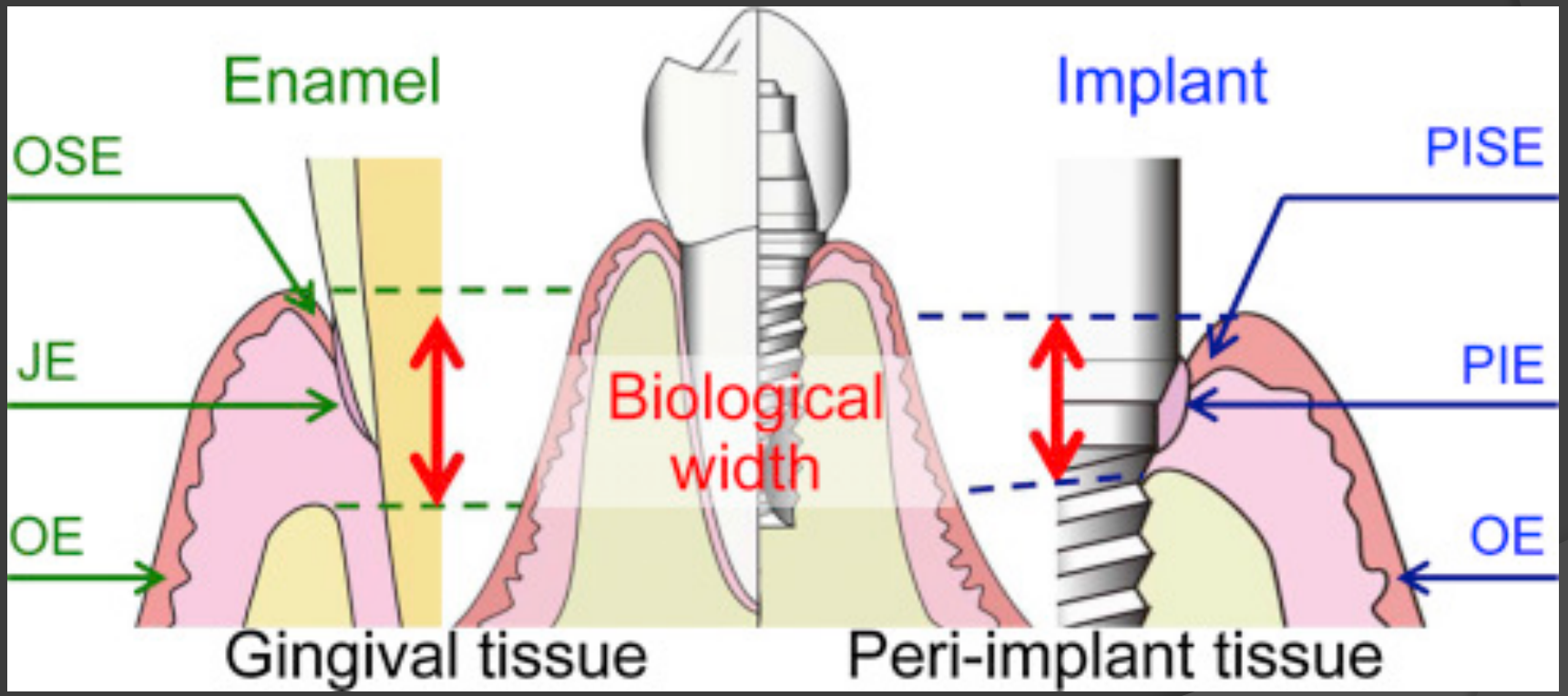
Fi

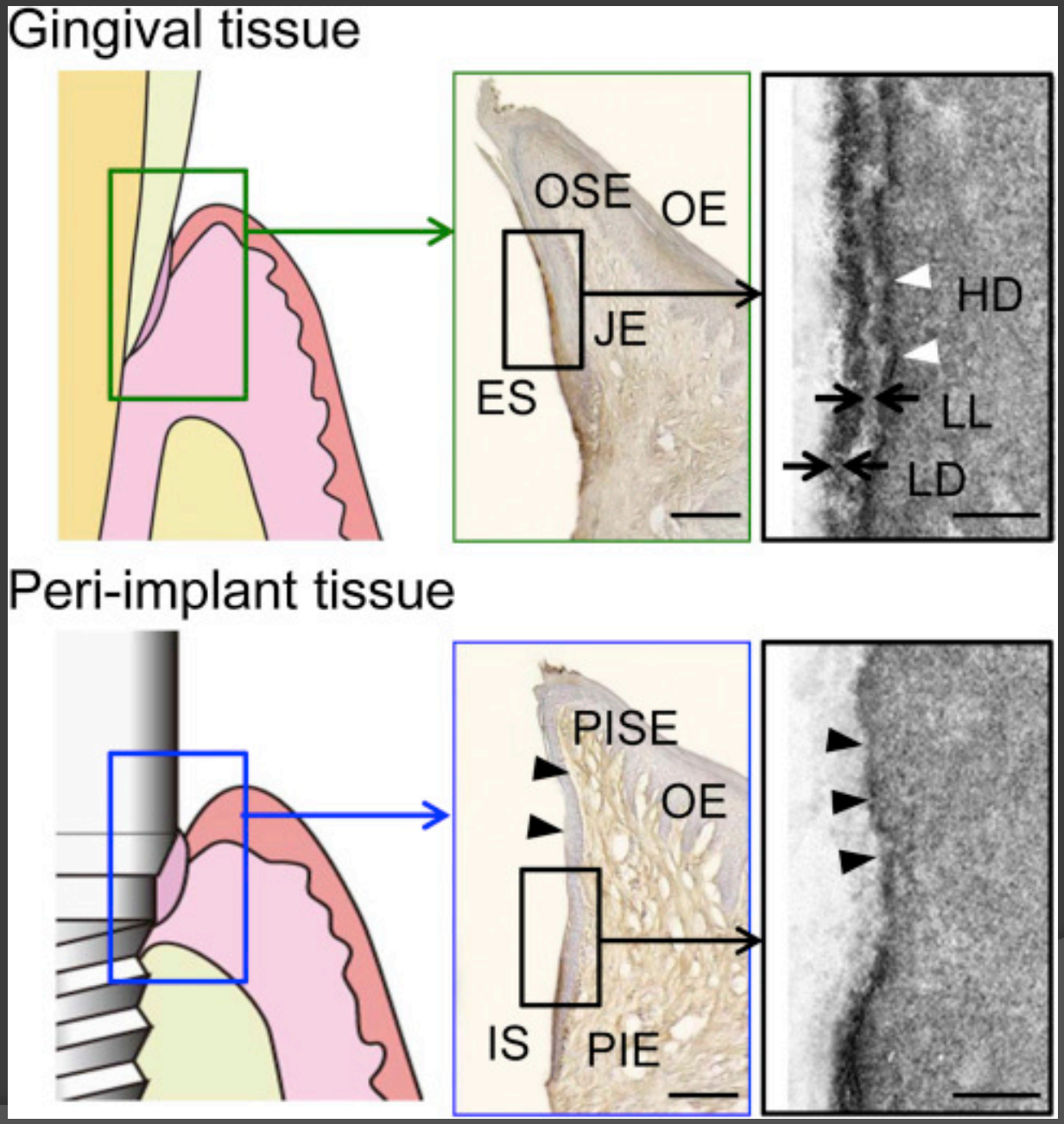


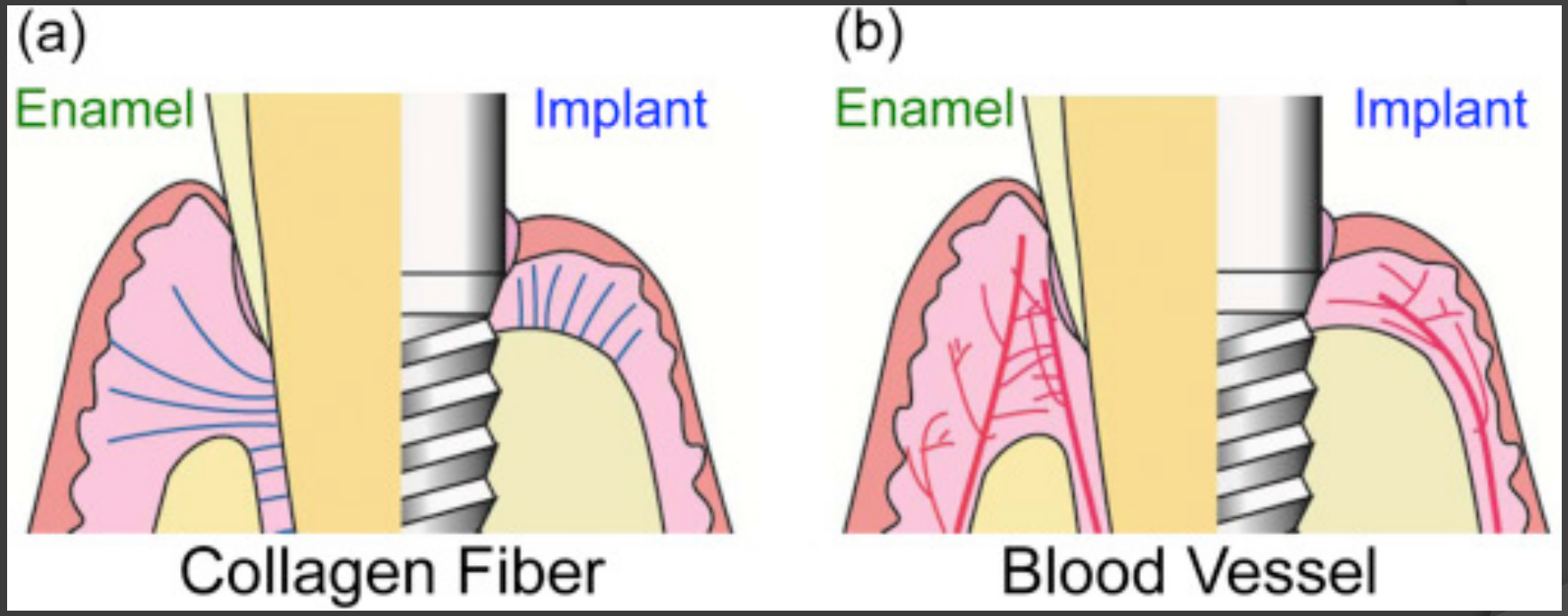


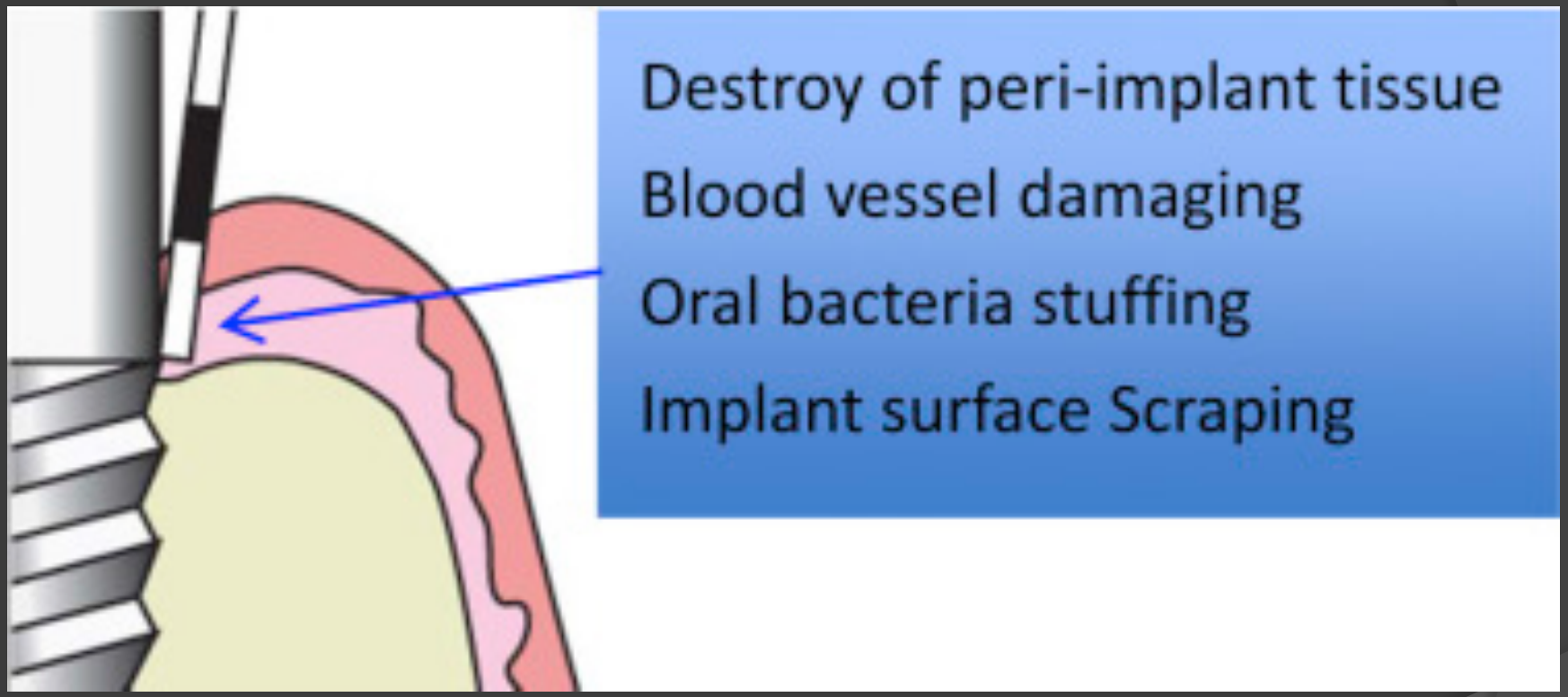
Soft tissue sealing around dental implants based on histological interpretation

IkiruAtsutaDDS, PhD Journal of Prosthodontic Research
Volume 60, Issue 1, January 2016, Pages 3-11




Gingival tissue
OSE
OE
JE
ES
HD
LL
LD
Peri-implant tissue
PISE
OE
IS
PIE


(a)
Enamel
Implant
Collagen Fiber
(b)
Enamel
Implant
Blood Vessel


Destroy of peri-implant tissue
Blood vessel damaging
Oral bacteria stuffing
Implant surface Scraping

How Much Bone Loss is Normal?

- 1-2mm bone loss in 1st year
- 0.1-0.2mm/yr after

2011 meta-analysis: 0.75mm over 5yrs.

Albrektsson et al., 1986, Adell et al., 1981, Smith et al., 1981, Laurell and lundgren 2011

Prevalence of Peri-Implantitis

- Peri-implant mucositis: 30.7% of implants
- Peri-implantitis 9.6% of implants

2012 EAO Consensus Conference: 1 out of 5 patients will experience peri-implantitis with 5 year after implant placement.

Klinge et al. 2012

Summary

- Implants: 89%
- Nonsurgical endodontics: 90%
- Surgical endodontics: TRS 59%, EMS 94%
- PIE-implant connection is much weaker than the JE-enamel connection
- peri-implant tissue has a reduced blood supply as the periodontal ligament source is not present.

Summary

- Evidence based
- Clinical skills
- Communication
- Happy patient
- Successful results

Thank You!