

CLINICAL APPROACH TO RETROGRADE PERI-IMPLANTITIS – A LITERATURE REVIEW

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ABSTRACT

Currently there is no uniformly accepted definition for retrograde peri-implantitis (RPI). It can be described as a primary microbial inflammatory condition that affects only the apical portion of an osseointegrated implant which retains normal Bone – Implant - Contact (BIC) in its coronal portion. First described by McAllister in 1992.

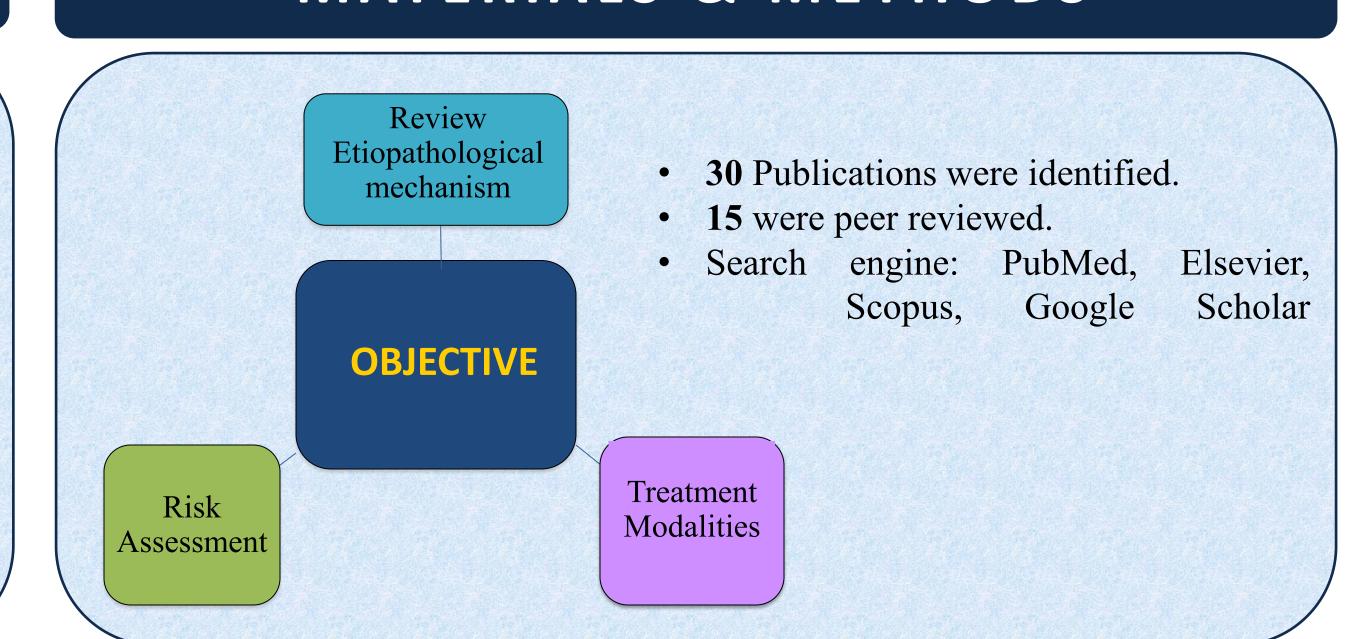
OBJECTIVE: The purpose of this study is to review etiopathological mechanisms, risk assessment and treatment modalities of this type of periapical implant bone loss.

RESULTS:

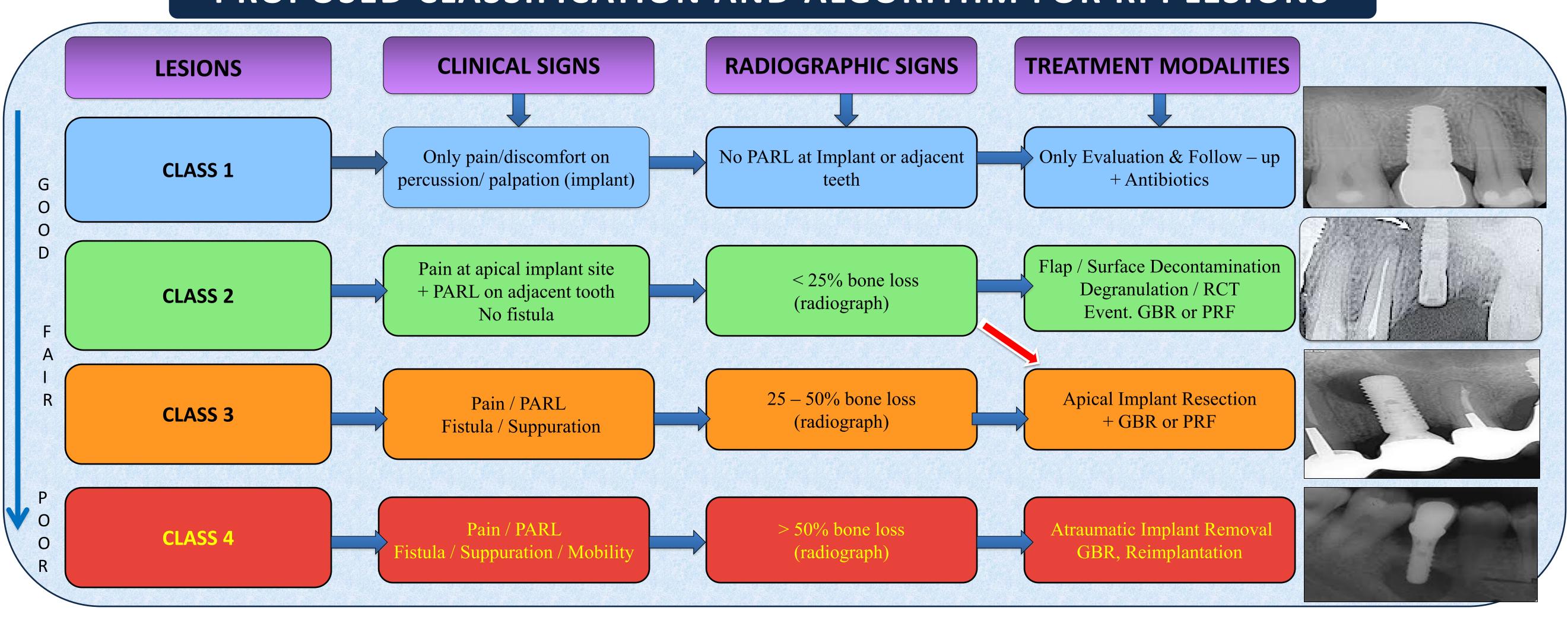
- •Prevalence of RPI is relatively low.
- •There is a lack of a classification system and a treatment algorithm.
- •Therapeutic options include antibiotics, implant apical resection eventually including apicoectomy of endodontically affected adjacent teeth, open flap debridement, bone grafting or laser treatment of surgical site before implant placement.

CONCLUSION: Implants affected with RPI most often remain osseointegrated. Considering the pathogenesis, prevention of RPI could easily be accomplished, if careful preoperative assessment of the implant bed and adjacent teeth is performed.

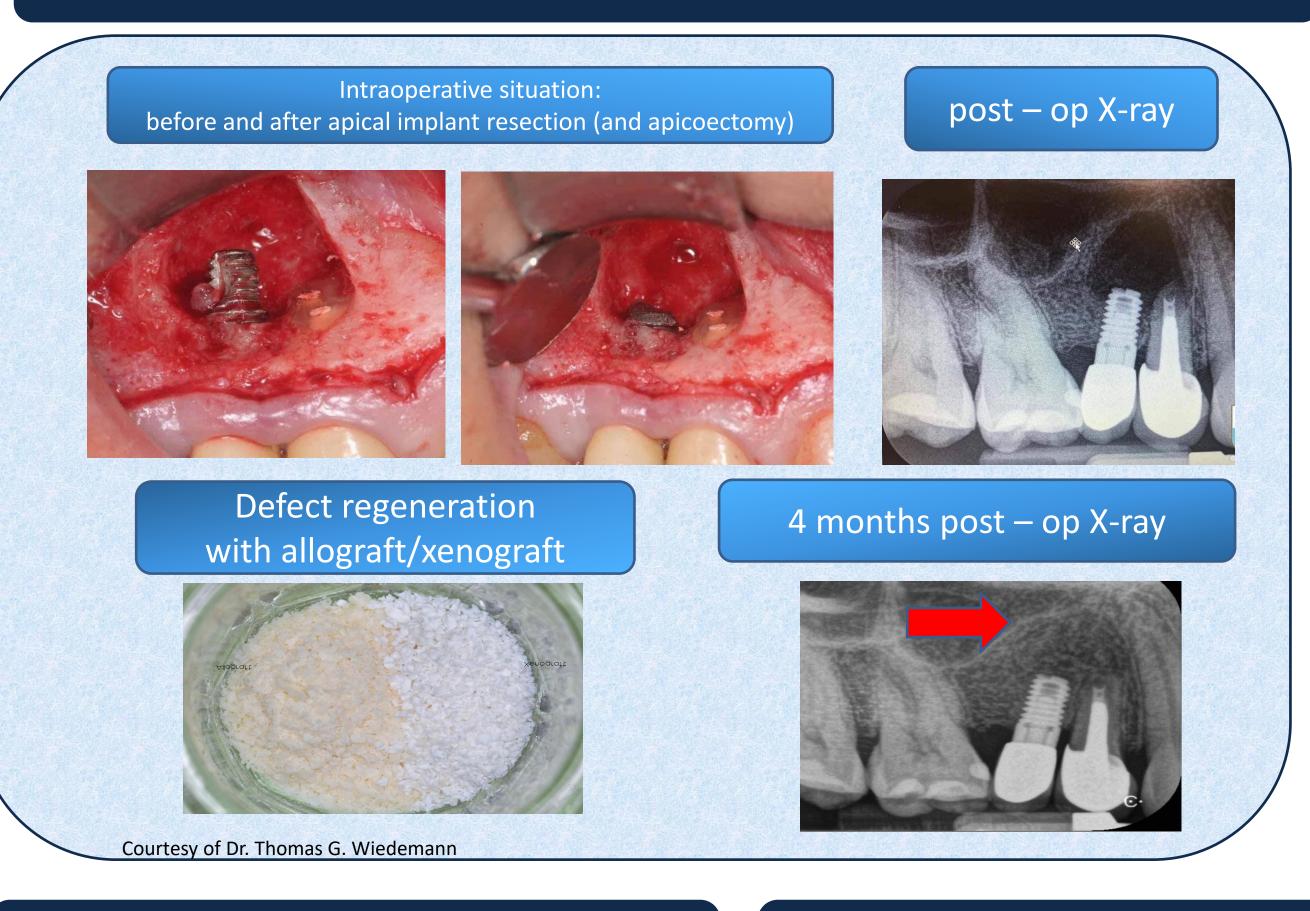
MATERIALS & METHODS



PROPOSED CLASSIFICATION AND ALGORITHM FOR RPI LESIONS



SURGICAL TREATMENT OF RPI



RESULTS

• 1.6% Maxilla (Reiser and Nevins) • 2.7% Mandible (Quirynen et al) Prevalence • Contaminated Surgical bed • Excessive heat during Osteotomy Etiology • Endodontic pathology of adjacent tooth • Bacterial contamination during Implant Placement Premature loading → bone micro factures

• Inflammation Manifestations

Clinical

Prognosis

• Pain

• Fistula

Swelling

• Apical resection of implant: 97.4% success

PRESERVATION OF IMPLANT

REMOVAL OF IMPLANT

ANTIBIOTICS Oral **Topical**

DEGRANULATION

Curettage of exposed implant surface

RCT / apicoectomy of adjacent tooth

DECONTAMINATION EDTA, Saline, H2O2,

Chlorhexidine, Lasers, Air abrasive device

Open Flap Debridement Apicoectomy of tooth apical implant resection GBR / PRF Implant removal

SURGICAL

Failed preservation therapy of implant

INDICATIONS

- Mobility of implant
- > 50% bone loss

PRESERVATION OF SITE

- Atraumatic Implant removal
- \rightarrow + GBR
- Or
- Atraumatic Implant removal
- → + immediate implant + GBR

CONCLUSION

- Prevalence rate of RPI is very low -0.26%
- **Etiology** of RPI mostly associated with endodontic pathology of adjacent teeth.
- **Prevention** of RPI easily accomplished by careful pre-op assessment of implant bed and adjacent teeth.
- **Treatment** recommendations:
- Conservative approach: antibiotics and follow up
- Surgical approach: implant preservation through open flap debridement removal of implant apex—bone grafting or implant removal
- Prognosis: Apical resection of the implant and GBR: 97.4% success rate v/s other treatment options: 75% - 90% success rate
- > 50% bone loss and / or implant mobility: Removal of Implant is suggested

REFERENCES

