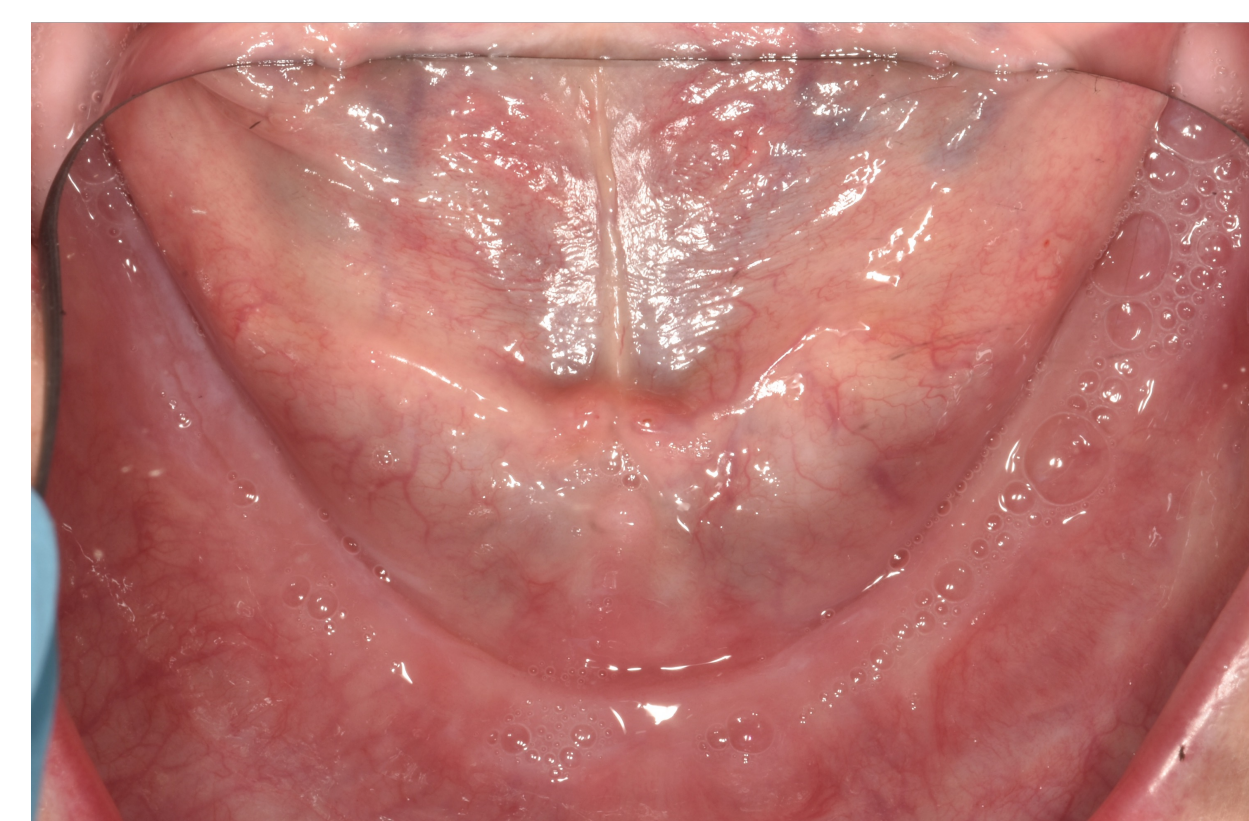
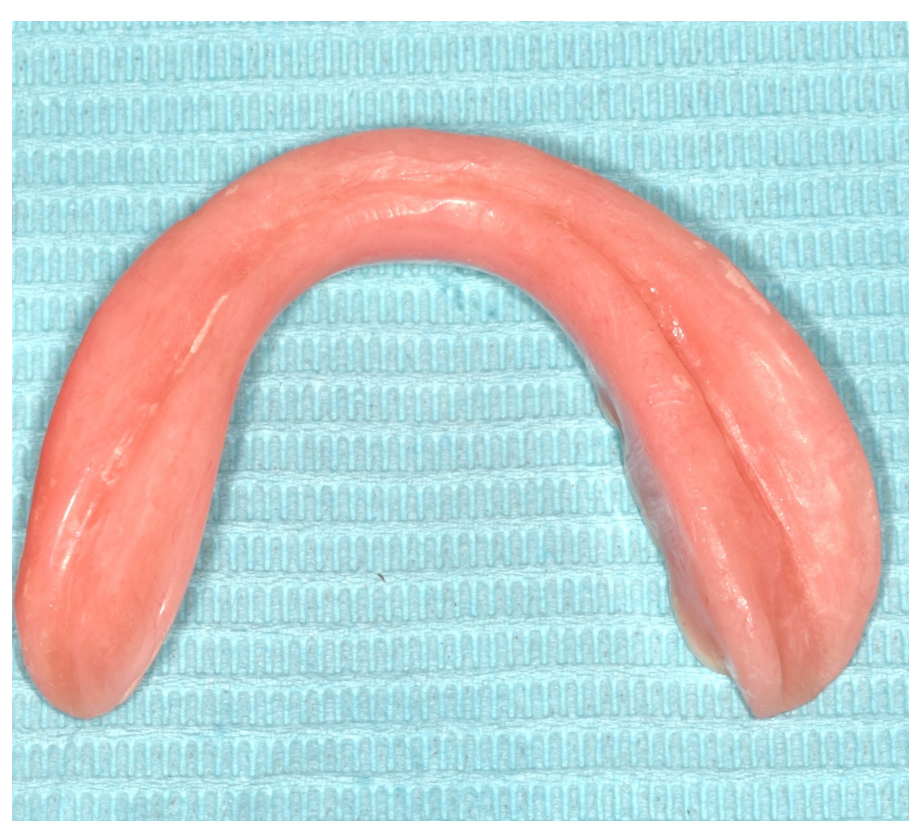


Introduction

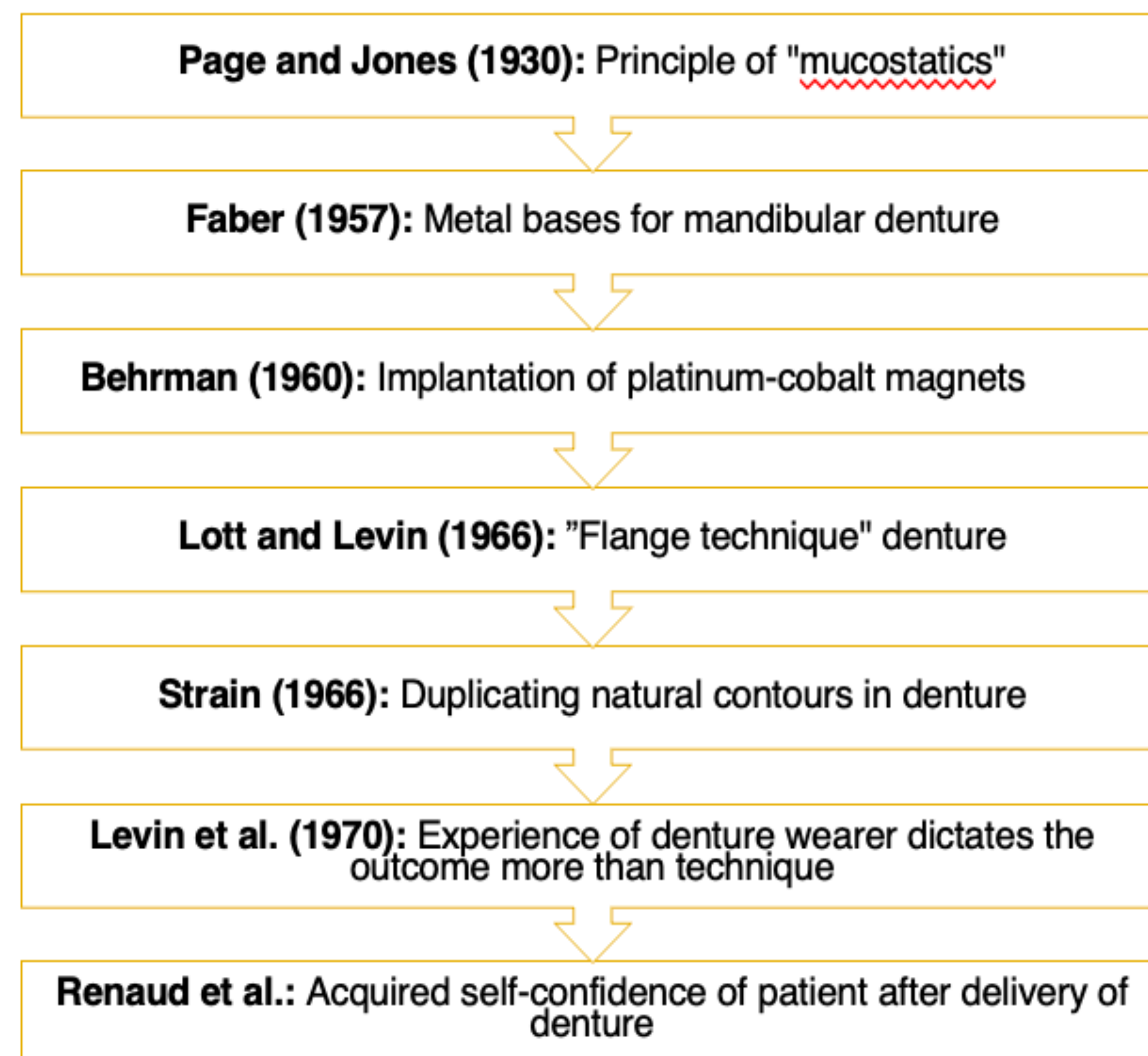
- Severely resorbed edentulous mandibles pose a great challenge to manage both prosthetically and surgically.
- Wearing a conventional denture can be difficult to the patient due to insufficient retention, stability, and support, thereby causing inadequacies in comfort, speech, and mastication.
- Close proximity of the alveolar crest and the mental nerve can also subject denture wearers to pain, paresthesia, or numbness.
- The aim of this literature review is to examine pre-prosthetic surgical and non-surgical modalities for treatment of severely resorbed edentulous mandibular ridges.

Patient History and Examination



- 57 y/o female denture patient presents with denture instability and neurosensory pain on lower left jaw. Patient has worn dentures for 30 years and presents with a severely resorbed mandibular ridge.
- Proposed treatment plan: utilize dental implants for a new mandibular overdenture in conjunction to pre-prosthetic surgery to treat the superficial position of the IAN.

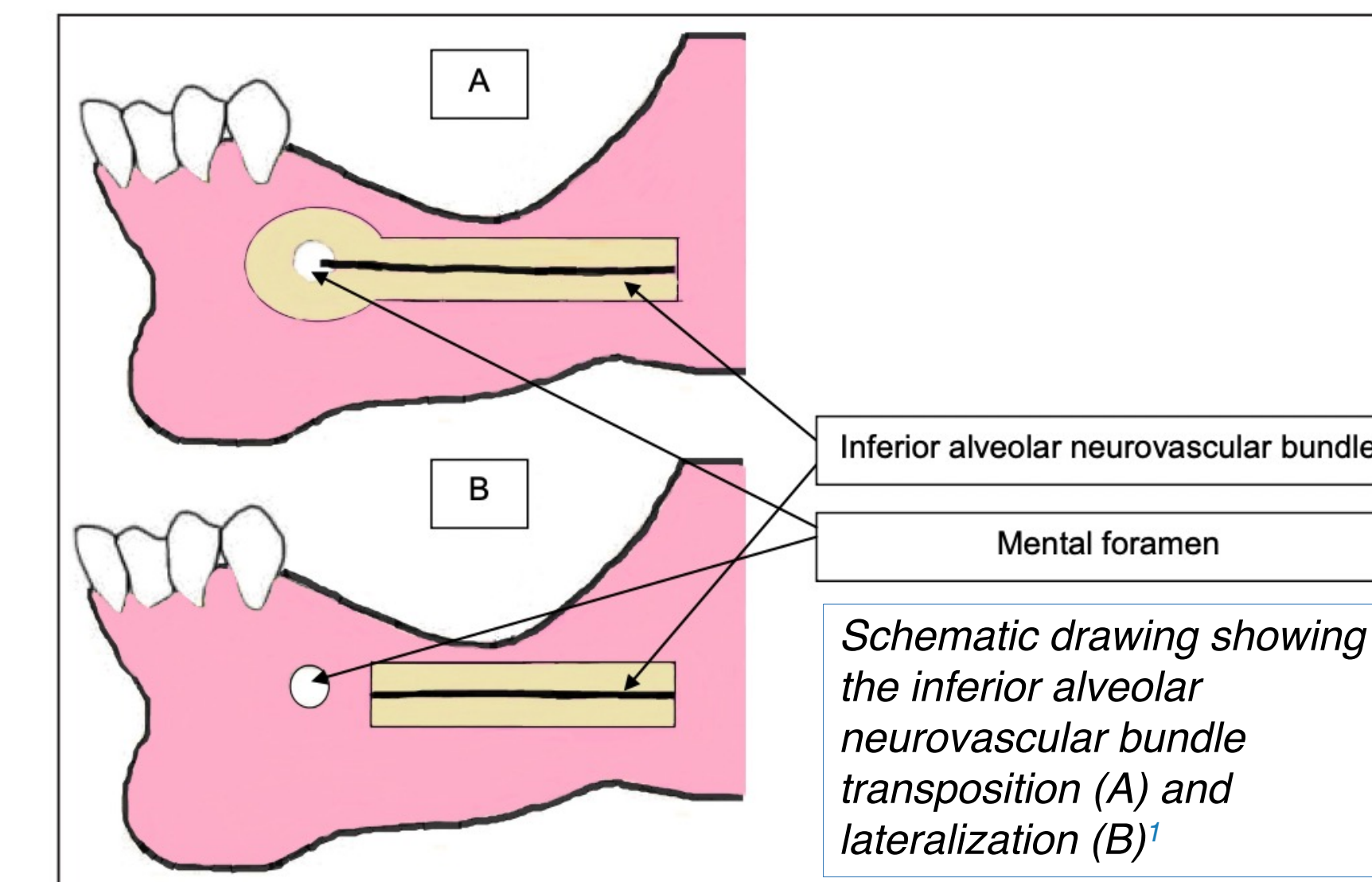
Historical Concepts



Surgical Management

Surgical Options to Treat Superficialized IAN

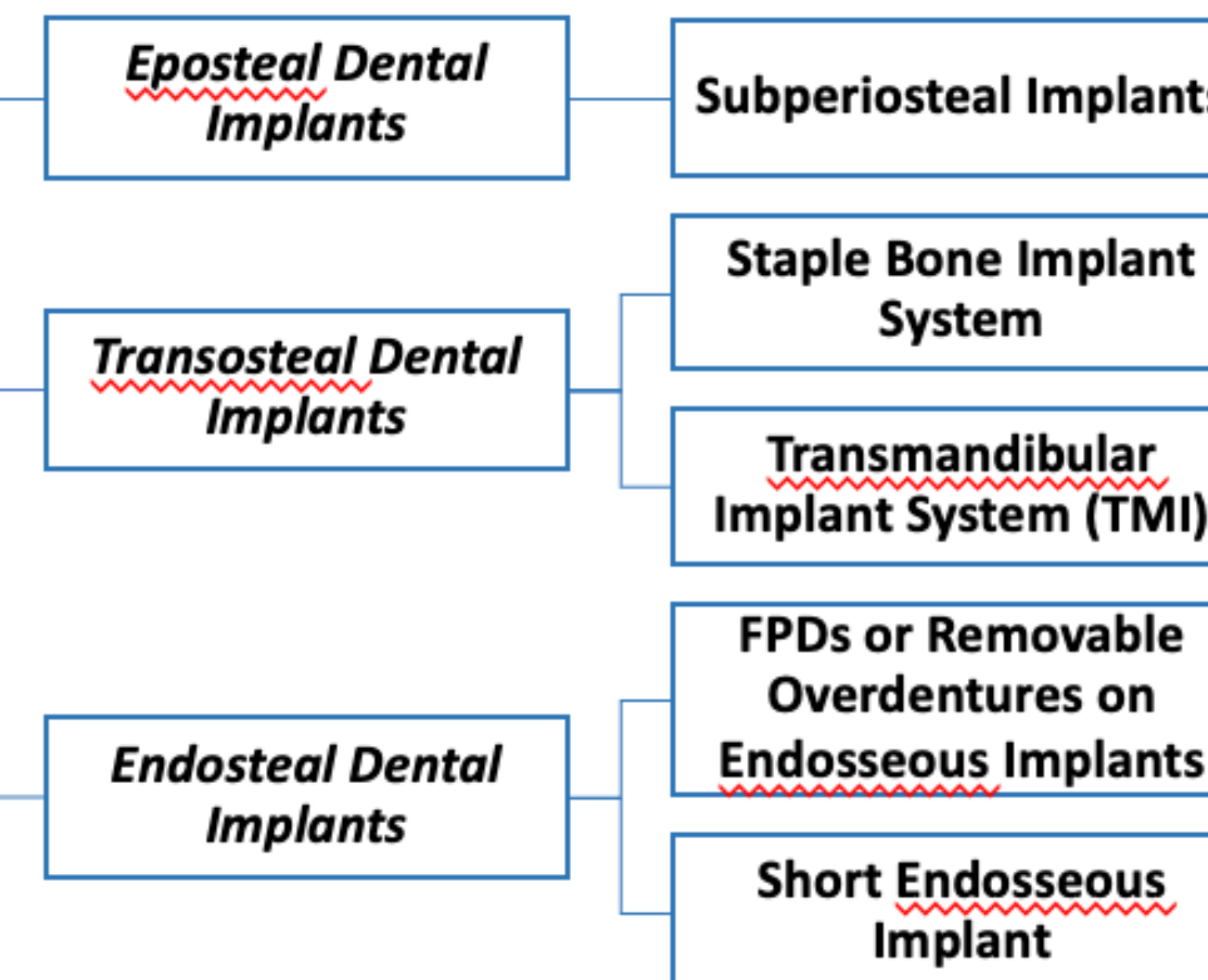
<i>IAN Lateralization (IANL)</i>	<i>IAN Transposition (IANT)</i>
Lateral reflection of the IAN without incisive nerve traction. Exposure and traction are used to deflect the IAN laterally while implants are placed.	Corticotomy is done around the mental foramen and the incisive nerve is transacted to allow transposition of both mental foramen and the IAN.



Grafting Techniques for Atrophic Mandibles

<i>Autologous Overlay Grafts</i>	<i>Alloplastic Grafts</i>
Developed as a variation of using crest of ilium	Most popular material is hydroxyapatite
<i>Osteotomy Grafts</i>	
Visor osteotomy	Interpositional bone graft

Incorporation of Dental Implants for Severely Resorbed Edentulous Mandibles



Possible Comorbidities

- Guarded long term success
- Gingival hyperplasia, crestal bone loss, and infections
- Difficult to remove or retrieve the implants
- Increased failure rate with mandibles less than 12mm
- Mandibular fracture
- Sensory disturbances of mental nerve, wound dehiscence, infections of grafted area, and donor area morbidity

Prosthodontic Management Without Surgical Interventions

- Preventive prosthodontics through maintenance of one or more endodontically treated roots and placement of an overdenture prosthesis.
- Neutral zone impression to aid in denture stability.
- Zero-degree teeth arranged in monoplane articulation to aid in denture stability.
- Use of long-term soft tissue reline material such as Molloplast-B.

Conclusion

- Severely resorbed edentulous mandibular ridges often require pre-prosthetic surgical interventions. Possible comorbidities should be thoroughly discussed with patients prior to surgery.
- Implants can be utilized to enhance retention and stability of the final prosthesis.
- Non-surgical prosthetic management with conventional dentures can be considered as another treatment option.

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