

Oral Health and the Impact on Appliance Provision.

Faculty of
Health & Wellbeing



Removable Appliances

Removable partial dentures (RPD's) are a cheap and effective manner in replacing dentition however there is some discussion around whether fixed or removable are the best options.

The effect of removable appliances has been studied in detail- gingival health, loss of attachment, gingival recession can increase.

Periodontal health has been looked at in detail- it can be shown that abutment dentition is more likely to have adverse periodontal health than none abutment dentition- how does this impact on design?

Effect of Removable Partial Denture on Periodontal Health of Abutments

E. Lavanya, Dhanraj Ganapathy, Sherlyn Sheeba

Perio disease progression

- There are environmental and acquired risk factors in the onset and progression of periodontal disease.
- RPD's can lead to changes in plaque bacteria that can be seen as the most important factor in the increased risk of periodontitis.
- It has been documented that wearing of RPD's can increase the progression of periodontitis and this has been proven in both arches.
- Poor design and maintenance of a denture will increase this risk

Use of removable partial dentures and progression of periodontal disease

[Umar, Sana,](#)

Design-

Piwowarczyk et al (2017) have noted:

- Main causes for abutment loss is periodontal issues (60 %)
- Kennedy classification can have an impact on abutment tooth loss especially in the cases of conical crown retained RPD's
- Conical crown retained RPD's can offer a favourable clinical prognosis- this is from a small sample group and further research is required.

Prognosis for Abutment Teeth of Removable Dentures: A Retrospective Study



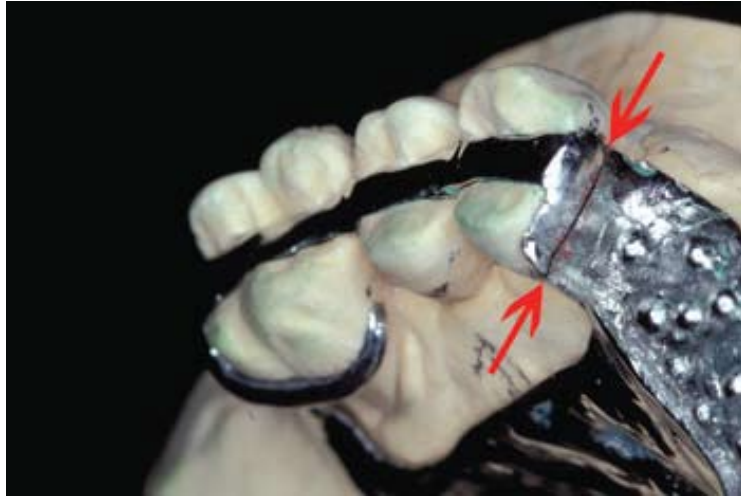
Continuing loss of dentition post restoration can be considered a failure. Stabilisation of remaining dentition can be beneficial. This can come in the form of milled guidelines on lingual and proximal surface enhances can enhance stability and retention of the prosthesis.

This is an expensive method of treatment as it is a combined treatment.

Multiple rests provide maximum support. The rests aid in the stabilization of mobile dentition in centric and eccentric movements.

If an excellent fit is observed between the milled crowns and the denture base it aid retention and lower the need for anterior clasps placement.

Removable partial denture design using milled abutment surfaces and minimal soft tissue coverage for periodontally compromised teeth: A clinical report- **Yada Chaiyabutrand James S. Brudvik**



In this case a continual rest is used as stabilisation for the mobile dentition. As this patient had lost anterior dentition aesthetics can be considered the primary need.

From the last two slides complex designs have been used which in themselves can be an issue, incorrectly fitting appliances due to impressions or the multiple stages of construction for the lost wax technique can in themselves exasperate pre disposed oral health issues.

Managing the maxillary partially edentulous patient with extensive anterior tooth loss and advanced periodontal disease using a removable partial denture: A clinical report
Polly S and James S. Brudvik

Management of periodontitis

- Treatment planning- to include periodontal treatment and adequate preparation (preparation of dentition for rest seat)
- Correct design- all components must be chosen and added selectively- incorrectly splinting the wrong dentition for example can have a negative effect.
- Choosing the correct materials- cobalt chromium with rest seats add on additional occlusal forces to dentition and therefore acrylic may be the best choice. However acrylic dentures in themselves provide further issues in the case of periodontitis.
- Periodic recalls- where patients are seen routinely with professional oral hygiene care periodontitis can be reduced. Being seen by the same practitioner may be beneficial.
- Patient education- correctly managing patients given effective home care instructions as well as managing their expectations of the device.

An evaluation of the effects of two distal extension removable partial denture designs on tooth stabilization and periodontal health- F. AKALTAN & D. KAYNAK

Conclusion-

Properly designed dentures, correctly made dentures, incorporating periodic recall and oral health advice *can* prevent deterioration of periodontitis. Who should do this and why?

Kennedy classification can have an impact on worsening the disease.

Patients should be properly motivated and educated.

Complex designs may be used under strict supervision and



Teaching Intensive, Research Informed

 @UoBHealth