Advanced Partial Dentures

A contradiction
or a true advance?

Aim
Looking to the
Partial denture option

Learning Objectives

Diagnosing
Treatment planning
Executing

Learning Objectives

Expectations have greatly
overtaken the service's original
remit over 50 years ago

Learning Objectives

We know that

- mean no of teeth amongst dentate
  adults was 25.7
- dentate adults - 60 % - have between
  27 and 32 teeth
- dentate adults had an average of
  17.9 sound and untreated teeth but
  this varied hugely with age
Who would have thought back in 1968...

- In 1968, 37% of population of England and Wales edentate
- Idea that more than half of people aged 85 or more would retain some natural teeth
- Unthinkable!

Restorations.....

- Adults aged under 45 years were less likely to have any fillings
- Relatively low numbers of filled teeth
- By contrast, 97% of dentate adults aged 45 to 54 had a filled tooth and they had 9.1 teeth affected

Partial Dentures, 2009 style

- Nearly 1 in 5 adults wore removable dentures of some description (partial or complete).
- This included almost all of the 6% who were edentate
- Plus 13% who relied on combination of dentures and natural teeth

Life - 2009 style

- Daily quality of life in terms of physical, psychological & social function
- Dentate adults attributed their oral impacts primarily to toothache, sensitive tooth or tooth decay, and to problems with their gums

Life - 2009 style

- Quality of life in terms of physical, psychological & social function
- Problems with smiling, main conditions identified were
  - Appearance of teeth
  - Bad position of teeth
  - Missing teeth

Life - 2009 style – the unexpected

- Lack of differences between dentate and edentate adults in self-rated dental health
- Most problems with dental condition not edentulous but natural teeth combined with dentures
Looking after teeth

- People are keeping teeth
- Major consumers of dental care

Summary

- Older generation grew up in period of high decay rates. Although kept teeth, have many restored teeth, which will require high levels of maintenance
- Much of dental disease affecting teeth of older people, is preventable using appropriate oral hygiene measures, diet control and fluorides

Issues

- “Dentists are going to have to think about and learn how to manage failing crown and bridge work, as it can be a technical and mechanical nightmare with very complex treatment management decisions.”

Issues

- Gingival recession …..the exposed root much more susceptible to decay than the crown. Treating root caries is often difficult and can easily result in loss of the tooth.

Issues

- “With gingival recession …..larger interproximal gaps and more places for plaque to accumulate. Patients need different hygiene techniques to clean those shapes effectively. And one thing dentists aren’t very good at is re-educating patients.”

Issues

- …..as people grow older they become less physically able to do small dexterous tasks. They develop arthritis in their hands; they lose fine motor control …..the physical act of brushing and cleaning becomes more of a challenge.”
Issues

- “All of these problems are largely preventable by getting back to the good old-fashioned basics of brushing the teeth twice a day and keeping sugary snacks to mealtimes”

Issues

- Educating older patients in proper brushing technique...the increased use of fluoride-containing toothpastes and mouth rinses would make a vast difference in the oral health of elderly patients.

Abutment tooth loss

- 1973 and 1994, evaluated 273 subjects (62.3% M) with a mean age of 59.6 years


Abutment tooth loss

- 273 subjects, 666 abutments
- 74 lost 133 abutments
- most common cause of tooth loss
  - Perio disease - 29%
  - Periapical lesions - 19%
  - Caries - 17%

Abutment tooth loss

- Subjects who lost teeth were more likely to have
  - medical problems - soft-tissue lesions of oral mucosa
  - less likely to use fluoride daily
  - were less likely to return for yearly recall visits
- 22 vertical fractures in 17 subjects.
  - overdenture teeth in upper arch against natural teeth
  - likely to experience vertical fractures

Abutment tooth loss

- follow up patients for as long as 22 years
- The rate of tooth loss was 20.0%
- Failures could have been prevented if patients had practiced better oral hygiene
No treatment:
The ultimate in minimal intervention

Shortened dental arch

This concept could be applied to any missing molar teeth, it has come to refer to dentitions that have no teeth distal to the second premolars in all four quadrants

Does it work?
No clinically significant differences between subjects with shortened and complete dental arches with regard to:
- masticatory ability
- signs and symptoms of TMJ disorders
- migration of remaining teeth
- periodontal support
- oral comfort


Does it work?
The shortened dental arch concept was accepted by a great majority of dentists but not widely practised

The shortened dental arch concept deserves to be included in all treatment planning for partially edentulous patients

Caries incidence

Two years after restoration of lower shortened arches for elderly patients, significantly greater incidence of new and recurrent caries lesions in subjects restored with RPDs compared with cantilever RBBs.

Jepson N.J.A. et al.
Caries incidence following restoration of shortened lower dental arches in a randomized controlled trial
British Dental Journal, 191; 40-44: 2001

Treatment plan

Registration of jaw relationship
Either ICP or RCP in wax
If number of teeth missing wax occlusal rims required.

A word on acrylic dentures
Top tip

Survey vertical path of insertion
Block out undercuts
Duplicate cast
Process on Duplicate Cast

Every Dentures
Summary

- Useful in some situations
- Polishing and adjustment requires special techniques
- Expense
- Long term studies – none out there

Further reading

http://www.dentistrytoday.com/prosthodontics/1746

A word on overeruption

Implants...

- Dental implants found in 1%
- Older people most likely to have implants
- less than 0.5% of adults 25 to 34y had at least one dental implant
- compared with 2% of adults 65 to 74, 75 to 84 and 85 and over
Thank you
End of Part 1
Any Questions?