Denture adhesives - application & rationale

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Classrooms
Denture adhesives - application & rationale
Statistic for edentulous patients, removable dentures and the problems related to them:

- 98% from the persons over 60 in Bulgaria are with at least 1 extracted tooth;
- 84% from these persons need a dental treatment
- Over 50% from them use removable dentures
- 24% from them are completely edentulous;
Statistic for edentulous patients, removable dentures and the problems related to them:

- In Canada, at each 4 persons, 3 are with at least one edentulous jaw;
- 34 000 000 are the completely edentulous persons in USA 1991;
- 38 000 000 is expected to be in 2020;
- 56 000 000 compete dentures are fabricated in 2000;
- 61 000 000 is expected to be in 2020;
- At 303 older patients in Australia, 64% are completely edentulous;
Conclusions:

1. Now and in the future the prosthetic treatment will be important for the older persons;
2. The complete edentulism is serious pathological condition;
3. The prosthetic treatment of complete edentulism is absolutely mandatory
4. The complete edentulism treatment must assure prosthetic rehabilitation and to keep from serious changes in structure and function in prosthetic area, maxillo-facial area and the whole body.
Complete edentulism problems:

1. Blocked important functions:
   - eating (mastication and chewing)
   - speaking (blocked sound articulation)

2. Prevention problems:
   - digestive system disturbance
   - night breathing problems, snoaring and roaring
   - fast alveolar bone resorption

3. Esthetic problems:
   - wrinkles
   - changed nose position
   - changed mentum position
   - changed cheek and lip muscles and position

4. Psychological problems !!!
**Complete edentulism problems:**

- Most of the patients are satisfied by their new complete dentures esthetics and partially their function;
- In the USA, 10% of the patients are unsatisfied and affected by their new dentures and this patients part is increased. 60% of the complete dentures are not well fabricated (unstable and unretentive)
- 29% from the patients in Bulgaria are not satisfied by their dentures and this dissatisfaction to the mandible complete denture is two times higher;
New complete dentures problems

- Uncomfortable denture, mucosal wounds, pain;
- Irregular chewing function;
- Unstable and non-retentive new denture;
- Impossible to be felt the food taste;
- Irregular speaking and sound articulation;
- Strange new face appearance and esthetics;
- Psychological discomfort;
- **Gagging reflex!!!**
Denture Adhesives

- The first denture adhesive is patented in 1913;
- Until 1939, 15,000,000 persons have tried and used denture adhesives;
- Now, 30% from the people in the world use denture adhesives;
- 15% from the people in USA use denture adhesives;
- 33% from the people in Turkey use denture adhesives;
- Coates: 52% from the patients don’t need denture adhesive;
Denture Adhesives

- From all complete dentures methods for retention and comfort, the adhesives are with greatest distribution, lowest price and lowest risk for the patient;
- Their correct application is the best testimony for the dentist’s knowledge in the ways of comfort and retention for the complete dentures;
Denture adhesives function:

- Raise up the denture retention time in the patient mouth;
- Enhance the maximum bite force;
- Improvement of the chewing function, mastication and speech;
- Comfort, security, self-confidence for the patient;
- Contraction of the adaptation period to the new dentures;
- Stop for the food to penetrate between the denture and oral mucosa;
- Decrease the Candida bacterias;
- Decrease the bone and soft tissue resorption;
Denture Adhesives
Dentures adhesives

The past opinion had been that the denture adhesives must be used in cases of bad fabricated, unstable dentures, dentures for relining. We have new opinion now. The adhesives must be used together with each removable denture. They provide high retention, comfort and function close to the natural teeth function.
Requirements to the denture adhesives

- To provide bond denture-prosthetic area 12-16 hours and to improve the retention forces;
- To provide mastication and speaking comfort;
- To reduce the adaptation period;
- To ensure neutral pH, to stop bacterial growth;
- To be non-toxic;
- To be easy cleared from the denture and oral mucosa;
- To be nice smelled and tasted;
- To be easy founded and with nice price;
Denture adhesives application

- Patients with high bone resorption, low possessed frenulum, movable mucosa;
- **Patients with high gagging reflex**;
- Xerostomia;
- AIDS, cancer, immunological diseases saliva glands dysfunction;
- Lost of anatomical maxillo-facial parts
- Psycho-prevention effect, better dentures adaptation;
- Immediate dentures high retention;
- To block denture stomatitis;
- Temporary crown fixation;
Contraindications for denture adhesives application

- Allergic reactions;
- Immediate dentures;
- Bad fabricated dentures;
- Cardio-vascular diseases;
- Immunosuppressivess patients;
- Alternative to the nice dentist skills;
Kinds of denture adhesives

- Soluble denture adhesives
Kinds of denture adhesives

- Insoluble denture adhesives
Complete dentures retention & stability

- One of the most important requirements to the prosthodontics restorations is to be stable and retentive. The most difficulty is with the complete dentures.
- If the complete denture is not stable and retentive the other positive qualities are eliminated.
Complete dentures retention & stability

- Better retention and stability maxillary
- Worse retention and stability mandible:
  1. TMJ
  2. Narrower mandible area
  3. Moveable masticatory mandible muscles
  4. Moveable tongue
Mechanical retention

- Springs

- Heavy mandible denture and light maxillary
Physical retention

- Magnets
- Adhesion, cohesion, capillarity
Biophysical retention

- Air space
- Light space
- Positive lines
- Border seal
- Denture adhesives
Retention of the different kinds of denture adhesives

- Paste and creams: better retention, perfect contact with saliva and mucosa

- Powders and insertions: very strong retention but short time effect!
Biomechanical retention

- Sublingual boxes

- **Surgery:**
  1. Deeping of vestibulum oris
  2. Change places of frenulums
  3. Cutting of exostosis
  4. GBR
  5. Implants
Denture adhesives - Why comfort?

- Absorber, bumper function
- Filling of the small denture/mucosa distances
- Improvement of retention, stability, functions, adaptation, the pain elimination…>comfort and confidence
Correct application of the denture adhesives

1. Cleaning of the mouth from food and old adhesive
2. Cleaning of the denture
3. Dry denture (except xerostomia)
4. Optimal quantity of adhesive
5. Biting in central relation for 10 sec. and sucking both of the dentures
Adhesive application

- Correct!!!
Adhesive application

- Wrong!!!
Insertions application

- Correct!!!
Gagging reflex and fabrication of maxillary palate reduced complete denture
Method
Method
Method
Method
Method
High gagging reflex
Bad opinion about denture adhesives

- The patients think that the denture adhesive is only for bad dentures
- Dentists think that the denture adhesives prove their bad skills;
- No substitution for the well made dentures;
- Adaptation elongation
- Increasing of the bone resorption;
- Allergic reactions;
- Mucosal hiperplasia;
- Candida growth and stomatitis
- Low pH;
- Zn > anemia;
The “perfect” denture adhesive

- Biologically inert to the tissues;
- Neutral taste and smell;
- Cream consistency;
- Not to go out of the denture borders- high viscosity;
- Easy application;
- Easy cleaning;
- To provide highest retention and stability;
- 12-18 hours function;
- To improve functions and psychology;
Without denture adhesives........

NO!

NO!!!

NO!!
With the help of the denture adhesives...

Yes!

YE$e$!!

YES!!!
Thank you for your attention!