

Limited partial edentation. Indications and stages of prosthetic treatment with non-metal bridge dentures.

The non-metal plastic bridge dentures are made during one laboratory stage, but their main disadvantage is low durability. They have negative influence on tissues of the oral cavity, can have allergic properties, therefore they are indicated at small (1-2 teeth) defects of dental arch in frontal area.

Composite artificial bridge dentures are stronger, than plastic, indifferent to soft tissues and more aesthetic because of possibility to create colour of natural teeth. Indications are the same as for plastic artificial bridge dentures. The process of polymerization depends on the kind of composite.

Porcelain artificial bridge dentures acquire parallelism of support teeth, their sufficient height and small incisor overlapping. Preparation of teeth will be carried out as under porcelain crowns with creation of parallelism between them. Laboratory stages are the same as at manufacturing porcelain crowns (made by classical or modern method).

Disadvantages of non-metal bridge dentures:

- can not be used in every type of partial adentia (especially ceramic BD);
- necessity of deeper preparation of hard tooth tissues of support teeth;
- necessary presence of support teeth with high crowns and creation of strict parallelism between them;
- possible broken of bridge, especially acrylic one that make to use them as temporal construction;
- plastic - hygroscopic material, causing in actively absorbtion of water and have properties of swelling;
- plastic rapidly changes in color, absorbing pigments;
- acrylic bridge lead to marginal periodontium tissues irritation;
- possible changes of colour of plastic;
- ceramic bridge can lead to pathological abrasion of teeth antagonists etc.

Indications to nonmetal Bridge Dentures manufacturing:

1. Partial adentia with absence of 1-2 neighboring situated teeth in frontal area of dental arch.
2. Plastic BD is used as temporal Bridge Denture.
3. Presence of high and big in volume support teeth.

Contraindications to non-metal Bridge Dentures manufacturing:

1. Absence of more then 1-2 neighboring situated teeth.
2. Partial adentia in lateral area of dental arch, if the acrylic BD is not used as temporal prosthesis.
3. Small in volume and short in high natural crowns of support teeth.
4. Deep kind of occlusion.

5. Bruxism.
6. Allergy to plastic or composite material.
7. Not treated or impossible to treat apical tooth area pathological processes.
8. Childhood and adolescence.

Clinical-laboratory steps of Ceramic Bridge Denture manufacturing:

CLINICAL – patient’s examination, diagnosis, choosing method of treatment, making an anaesthesia (if it is necessary), hard tooth tissues preparation, taking the impressions, determining and registering interjaws relationships, determination the colour of ceramic, protection of remained hard tooth tissues by covering them with protective lacquer or temporal crowns (an important aspect of restoring damaged teeth).

LABORATORY – making gypsum models and their fixing in simulator. Making bridge denture by burning layers of ceramic and his testing on the gypsum mold.

CLINICAL – testing Bridge Denture in the oral cavity.

LABORATORY – correction and glazing BD, testing the BD on the model.

CLINICAL – final testing and fixing the BD in the oral cavity. Advises.

Clinical-laboratory steps of Acrylic Bridge Denture manufacturing:

CLINICAL – patient’s examination, diagnosis, choosing method of treatment, making an anaesthesia (if it is necessary), hard tooth tissues preparation, taking the impressions, determining and registering interjaws relationships, determination the colour of acryl, protection of remained hard tooth tissues by covering them with protective lacquer or temporal crowns (an important aspect of restoring damaged teeth).

LABORATORY – making gypsum models and their fixing in an articulator. Modelling BD from the wax and changing the wax in acryl by polymerisation and his testing on the gypsum mold.

CLINICAL – testing Bridge Denture in the oral cavity.

LABORATORY – correction and polishing BD, testing the BD on the model.

CLINICAL – final testing and fixing the BD in the oral cavity. Advises.

Clinical-laboratory steps of Composite Bridge Denture manufacturing:

CLINICAL – patient’s examination, diagnosis, choosing method of treatment, making an anaesthesia (if it is necessary), hard tooth tissues preparation, taking the impressions, determining and registering interjaws relationships, determination the colour of composite, protection of remained hard tooth tissues by covering them with protective lacquer or temporal crowns (an important aspect of restoring damaged teeth).

LABORATORY – making gypsum models and their fixing in an articulator. Modelling BD from the composite by fotopolimerisation and his testing on the gypsum mold.

CLINICAL – testing Bridge Denture in the oral cavity.

LABORATORY – correction and polishing BD, testing the BD on the model.

CLINICAL – final testing and fixing the BD in the oral cavity.

Errors at BD using:

- 1) result of incomplete examination of the patient is wrong determination of clinical status of support teeth;
- 2) expansion of indications to using bridge dentures takes place when it is not taken into account pathogenesis of disease or the nature of relationships between bridge dentures and tissues of prosthetic field;
- 3) overloading support teeth and their premature removing - due to incorrect selection of number of support teeth because of incorrect determination of their capabilities;
- 4) inadequate previous special training, which did not eliminate disorders of occlusion;
- 5) injuring mucous membrane of alveolar process (in case of errors in modelling pontic of BD, which was created with large contact area with mucosa);
- 6) absence of multiple occlusal contacts of BD with teeth antagonists;
- 7) incorrect modeling cusps of artificial teeth;
- 8) increasing interalveolar height on dental bridge;
- 9) poor aesthetic quality of bridges;
- 10) different technical errors.