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IMPLANTATION METHODS

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Resume: The article provides information on the types of dental implants and implant materials for osseointegration. Based on information about implant methods, information is given on which methods can be used in partial and edentulous cases. based on implantation methods, there was a need to develop new technologies for solving the medical and social problem and for effective complex treatment of patients with partially and completely missing teeth..

Key words: Immediate, Delayed, One-stage and Two-stage implantation

IMPORTANCE OF THE SUBJECT

Directly (directly) - after the tooth is removed, it is placed in the tooth cage at that time. This method is used when removing frontal teeth. Only the extracted tooth should not be affected by periodontal disease. After the tooth is removed, its place is formed into an implant. After the implant is placed, the neck is tied with a ligature and elastic. On the 6th day, on the 7th day, a temporary prosthesis is made, and after the 3rd month, a permanent prosthesis is made.

Delayed - it is placed after the tooth cage is finished, it is done in 1.5 months to 1 year. The delayed method is carried out in 4 stages.

1. The mucous membrane and periosteum are opened.
2. A place is formed in the bone for the implant. Boring machine or by hand. It should be remembered that the bone can become necrotic above 47 degrees.
3. Installing the implant on the bone. By twisting the screw implants, the implants are inserted into the bone by knocking down the lower jaw bone on its hard branches.
4. Close the operating surface.

By stage.

1. At one stage. In this type, the root part of the implant is located in the bone, and the crown part is located in the oral cavity. The neck part is adjusted to the border of the mucous membrane. It is a simple and widely used method, it is not used in complex prostheses, only 1 or 3 are placed.
2. In two stages. At the 1st stage, the root part of the implant is installed, osseointegration is completed, 2nd stage prosthetics begins after 3-4 months in the lower jaw and 5-6 months in the upper jaw.

Types of implants: Root-shaped dental implants, plate dental implants, basal implants, endodontic dental implants, subperiosteal dental implants, intramucosal implants, mini implants and cheek implants.

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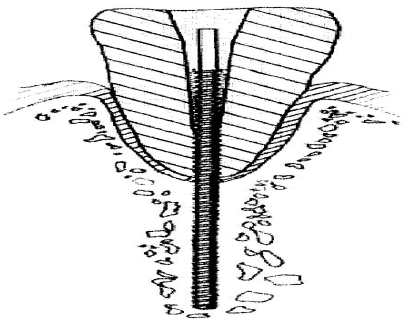



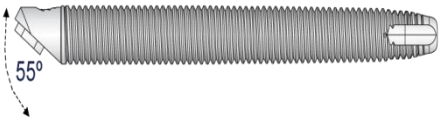

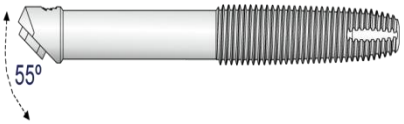

IMPLANT MATERIALS

In dentistry, depending on the material, implants are divided into 3 groups.

1-Biotolerant implants - cobalt, chromium and molybdenum

2- Bioinert implants - titanium, aluminum oxide, carbon

3- Bioactive implants - glass ceramic with bioactive surface, calcium phosphate ceramic, hydroxylapatite

Most widely used implant materials are made of metal and its alloys. Stainless metal, titanium, nickel-titanium, silver-palladium alloys.

Implant materials must meet the following requirements.

It should be corrosion-resistant, durable, non-toxic, non-allergic, aesthetic, easy to use, easy to sterilize, and non-galvanizing

OSTEOINTEGRATION.

Osseointegration was discovered by the Swedish professor Per-Ingvar Branemark in 1952 while studying the vascular system of the bone marrow in the rabbit fibula. Branemark described osseointegration as the attachment of highly differentiated bone to a functionally load-bearing implant surface. As a result of the experiments carried out in the early 1970s, scientists discovered another feature of intraosseous implants: the ability of bone tissue to join the implant without forming connective tissue layers and maintain this type of attachment even in the presence of a strong functional load. possible

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There are 3 periods of osseointegration.

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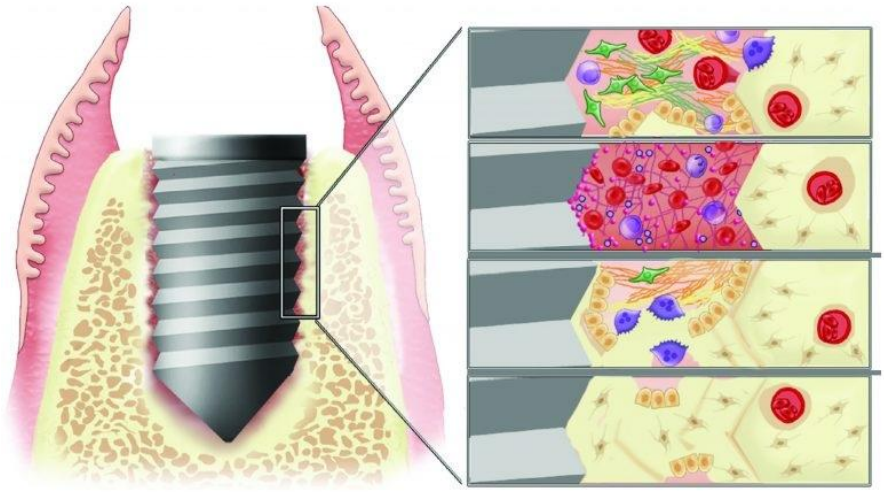
1. Osteoconduction - the process of formation of the primary matrix on the surface of the implant. Such changes occur on the first or second day and are accompanied by:
Mononuclear cells migrate and adhere to the surface of the implant and become macrophages.
Initiation of macrophage cell transformation into fibroblasts.
Synthesis of secondary and tertiary collagen.
2- Mineralization- direct bone formation is observed due to mineralization of the bone matrix. At this stage, bone-forming cells and differentiated fibroblasts on the surface of the implant synthesize the first type of collagen. Such changes are observed after the second day after the start of treatment.
3. Ossification or Secondary Reconstruction- The reconstruction process takes about eighteen months. Its result is the formation of mature bone structures.
Osteointegration factors
The success of implant osseointegration depends on general, local and surgical factors.
Common factors are sex, age, diabetes and smoking
Local factors - raw materials, the amount of bone tissue, excess load, the surface of the joint between the implant and the bone.
Surgical factors - working with water to prevent bone overheating and necrosis.
use of sharp tools and not exceeding 2000 speed (minute).
A temperature of 56 ° C is very important for bone. In no case should excessive heat be allowed.
The abutment should be fixed to the implants with a force of 45-50 Nsm using a dynamometer tool.



MATERIALS AND METHODS.
A patient treated with orthopedic procedures in partial and complete edentulousness of tooth rows with direct, delayed, one-stage and two-stage implantation methods was observed and examined.
RESULTS
As a result of our observations, patients were treated with all types of implants, that is, direct, delayed, one-stage and two-stage implantation.
CONCLUSION
Treatment with immediate, delayed, one-stage and two-stage implantation methods, materials of implants and their requirements, good study and application of osteointegration factors will lead

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to a good result.

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