# ASPECTS OF USING TRANSDENTAL IMPLANTS IN CONSERVATIVE AND OPERATIVE DENTAL SURGERY

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**Annotation**
In recent years, all over the world, much attention has been paid to the widespread introduction of tooth-preserving operations performed on an outpatient basis. The arsenal of these operations includes well-known methods of cystectomy with resection of the root tips, hemisection, amputation of the roots of the teeth and coronary radicular separation. However, doctors rarely use these operations and often extract teeth even in cases where it is possible to save them. At the same time, the preservation of such teeth, even with reduced resistance, has undoubted advantages both from an economic point of view and from the point of view of the prospects for the functional results of treatment.

**Keywords:** dental surgery, treatment, diagnosis, method, technology.

## INTRODUCTION

Dental implantology significantly expands the possibility of dental practice, as it allows you to save teeth that have lost their stability due to various reasons [2]. In particular, endodonto-endoosseous implantation (EDI), in which a tooth is fixed with the help of transdental implants (TDI), is one of the most effective methods for strengthening mobile teeth, which contributes to their use as a support even in a fixed prosthesis [3]. It is possible to strengthen both a single tooth and groups of teeth in case of periodontal and periodontal diseases, including after tooth-preserving operations, dental injuries [4]. The basic problematic research over the past 5 years includes the study of the processes of adaptation, compensation, regeneration, as well as processes of intracanal integration close to them, in particular, osseointegration of implants.

## MATERIALS AND METHODS

Before endodonto-endoosseous implantation, diagnostic studies were carried out to assess: root canal patency; bone volume for stabilizer fixation; the adequacy of the implant design to the future load on the tooth, including as its support for the denture. During the operation, the

visiogram was used to control the introduction of TDI and its penetration into the bones. The value of the implant penetration depended on the conditions of the bone - the proximity of the anatomical formations. X-rays and CT clarified the relationship of TDI with adjacent teeth, with the maxillary sinus, the mandibular canal, and the mental foramen.

## RESULTS AND DISCUSSION

The radiographs of the teeth were compared with the orthopantomogram, they determined the size and quality of the bone, and also predetermined the position in the bone, the depth of the TDI: at least 2 mm of bone tissue to the bottom of the nasal cavity or maxillary sinus and 3 mm to the canal of the lower jaw, up to the chin hole.

Before implantation, a plan was drawn up for the restoration of the tooth crown and future orthopedic treatment, including taking into account the function of the tooth with a stabilizer in the design of the denture.

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Having advanced through the root canal of the tooth and immersed in the bone by 4-6-8 mm, the stabilizer is fixed motionless in the bone. In some cases, according to indications, with partial absence of teeth, endosseous implantation was also performed. The position of the intraosseous part of the implant was controlled by X-ray or by visualization.

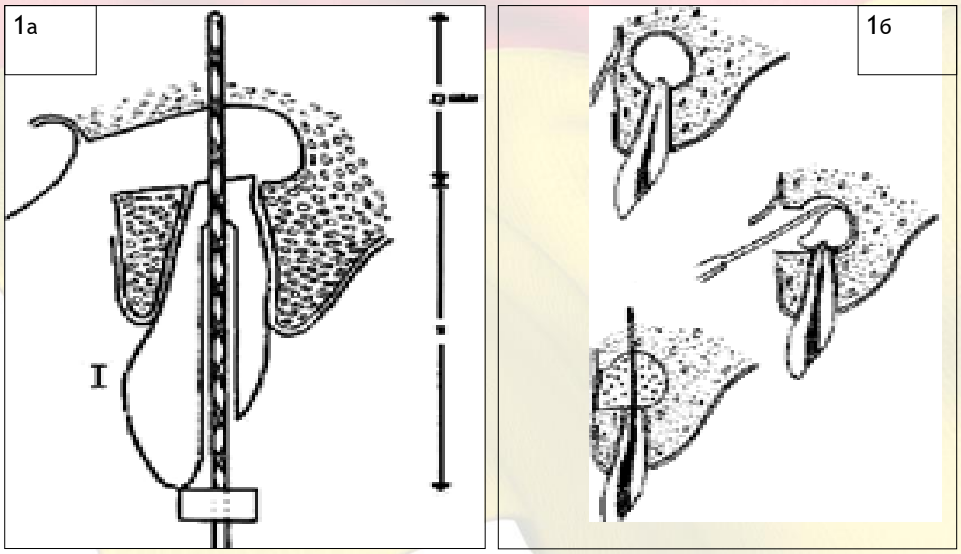


Fig. 1 — approximate insertion of a TDI analogue, b — implant with biomaterial during cystectomy and resection of the root apex

In the complex therapy of patients, periodontal treatment was also carried out: curettage, patchwork operations, elimination of intraosseous pockets, supracontacts, etc.

Endodonto-endoosseous implantation is an effective method that complements the treatment of chronic inflammatory processes in the periodontal, periodontal, trauma, and allows you to strengthen the teeth, ensuring their stability and long-term functioning. The universal transdental implants developed by us provide fixation of teeth, even in conditions of a small amount of bone tissue. Implants are highly effective in osseointegration and fibroosseointegration, as they have micromobility similar to the physiological tooth mobility and allow the functioning of teeth in orthopedic structures. Universal TDI can be used for bone defects formed after removal of root granulomas or cysts.

## CONCLUSION

For the purpose of osteostimulation of the defect and prevention of complications during endodonto-endoosseous implantation, the use of biomaterial "Kollapan" is recommended.

Endodonto-endoosseous implantation does not require complex surgical instruments for installation and allows solving a wide range of problems in therapeutic, surgical dentistry, periodontics, orthopedics and orthodontics.

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