

Treatment of Patients with Tiolox-Dentaurum Dental Implants at the Polyclinic Shoshi

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ABSTRACT

Introduction: The importance of the dental implantology has influenced the development of many treatment methods in this field. The aim of our study is to evaluate the advantages and disadvantages of the treatment with TIOLOX-DENTAURUM dental implants in cases of partial and total lack of teeth, compared to classic dentures. To conduct our research we have used the prospective method. **Material and methods:** The analyzed cases have undergone surgical treatment at the "Polyclinic Shoshi" in Prishtina during 2010–2011. This study included 29 patients, 23 in the research group and 6 in the control group. The patients involved in the study were 30-59 years old. 52,2% of our patients were 30-39 years old, while 17,4% were 50-59 years old. **Results:** In the research group, the average time of placing the dental bridges in the lower jaw was 2 months and 4.2 months in the control group. In the upper jaw, the average time was 3 months for the experimental group and 5,4 months for the control group. **Conclusion:** The period after the placement of implants until the placement of dentures, can be shortened from 4-6 months to 3 months for the upper jaw and from 3 to 2 months for the lower jaw.

Key words: Dental implants, Tiolox-Dentaurum, Polyclinic Shoshi, treatment

1. INTRODUCTION

The importance of dental implantology has influenced that many oro-maxillofacial surgeons get involved in this issue. This influence has made that today we have many methods and manufacturers in this field. The aim of our study is to evaluate the advances and weaknesses in patient treatment with TIOLOX-DENTAURUM dental implants in cases of partial and total lack of teeth, compared to classic prosthesis/dentures, whether static or mobile. To do case analysis before and after placing the implants, at what age they have undergone the surgical intervention and in which cases the placing of implants cannot be done. The prospective method of research has been used, analyzing cases that have undergone surgical treatment at the "Polyclinic Shoshi" in Prishtina, in a two year period, from 2010 to 2011. 29 patients were included in the study. Patients were divided in two groups:

- Research Group – with 23 patients in which the implants were placed in a shorter time period
- Control Group – with 6 patients

With distribution of cases based on gender, out of 23 cases in the first group, 12 or 52.2% were females and 11 or 47.8% were male, while in the control group we had three females and three males, but without differences with significant statistical importance. The patients involved in the study were of age 30-59 years old. In structure higher than 52.2% were in group age of 30-39 years, then 40-49 years were 30.4% and 50-59 years were 17.4%. With distribution of cases based on group ages and gen-

der, we got statistically important difference (Chi test = 12,5, $p = 0,0078$).

We had more females in the group age 30-39 years old (58.3% vs. 45.5%), while men in the group age 40-49 years old (25.0% vs. 36.4%) and 50-59 years (16.7% vs. 18.2%). All the TIOLOX implants used were of 3.5mm thickness, and 10-16 mm long. In our patients, mostly were used implants 16mm long in 58.1%, 14 mm long in 17.1%, and 10mm long in 16.2%. In the research group, the average time of placing the dental bridges in the lower jaw was 2 months ($SD \pm 0,1$ month), and in control group 4.2 months ($SD \pm 0,5$ months). In the upper jaw, the average time of placing the dental bridges at the experimental group was 3 months ($SD \pm 0,15$ months), and in control group was 5,4 months ($SD \pm 0,6$ months). At the end of this scientific study, at the cases we have worked, we can conclude that the period after the placement of implants until the placements of prosthesis, can be shortened for the upper jaw from 4.6 months to 3 months, and for the lower jaw from 3 months to 2 months, based on co-existence of the bone and primary stability of the implant.

Oral implantology is a part of stomatology that works with placement of implants aiming to improve the function of chewing, esthetics and phonetics in cases of total or partial lack of teeth. A very important factor which determines the success of the implantation is the selection of the patient who would be ready to cooperate with the doctor at every stage of the work.



Figure 1. Initial drilling



Figure 2. Presenting of the implant



Figure 3. Placing of implant



Figure 4. Placement of cover caps over implants



Figure 5. Placement of mucoperiosteal flap and stitching



Figure 6. Final phase of placing the implants

The anamnesis and the examination of the mouth cavity should be done in all patients who are willing to undergo implantation. Anamnesis will show us, what cause led to the loss of teeth and the level of the oral hygiene.

The overall and the local health condition of the patient and also the characteristics of the bone tissue in which the implant will be placed, are crucial for the selection of the patient.

Implanting is not limited to age, having in mind that all the other factors are fulfilled. Mouth cavity should be completely cured endodontically, paradontically and surgically. It is also necessary to do a radiography and as needed, to make the study models and photographs, biochemical analysis of blood, blood screen, sedimentation and leukocyte formula (22,23).

The importance of dental implantology has influenced many oro-maxillofacial surgeons to get involved in this field of maxillofacial-surgery.

2. AIM

To do evaluation of advantages and disadvantages of the treatment with TIOLOX-DENTAURUM dental implants in cases of partial and total lack of teeth, compared to classic dentures.

To analyze the cases before and after the placement of implants, at what age they undergo surgical treatment and in which cases the implantation cannot be applied.

3. MATERIAL AND METHODS

To conduct this scientific research we have used the prospective method of research, analyzing cases of dental implantology which undergo the surgical treatment at the Polyclinic Shoshi in Prishtina, in a two year period, 2010-2011. Comparison will be done for the period from the

placement of the implants until the placement of dental dentures in the "Polyclinic Shoshi", with dental implants TIOLOX-DENTAURUM, with the data from other authors. For verification of statistical importance of differences between the parameters, we have used statistical tests, verification of which will be done with the confidence scale with error for $p < 0.05$ and $p < 0.01$.

29 patients that are included in the study, have been divided in two groups

1. Research Group – with 23 patients and **2. Control Group** – with 6 patients

Patients were divided into two groups:

- **Research Group** – in which were included 23 patients in which the placement of the superstructure was done two months after the placement of the implants in the lower jaw and after three months in the upper jaw.
- **Control Group** – This included 6 patients in which the superstructure was placed four months after the placement of the implants in the lower jaw and five months in the upper jaw.

4. RESULTS

In this work, 29 patients were included. The patients were divided into two groups:

- **Research Group** – in which were included 23 patients in which we placed TIOLOX-DENTAURUM implants, and the placement of the superstructure was done after two months in the lower jaw and after three months in the upper jaw.
- **Control Group** – This included 6 patients in which the same type of implants was used, but the superstructure was placed after four months in the lower jaw and five months in the upper jaw.

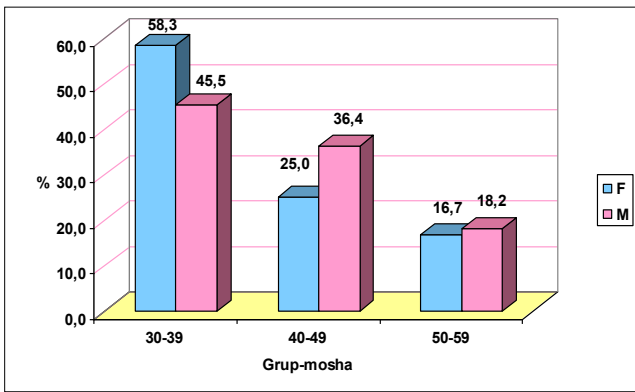


Diagram 1. Structure of patients based on group-age and gender.

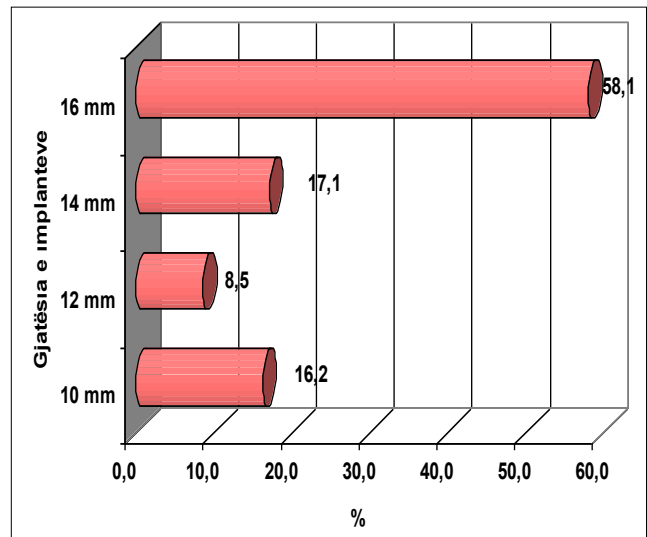


Diagram 2. The structure of implants used based on length. (25.0% vs. 36.4%) and 50-59 years (16.7% vs.18.2%) (Diagram 1).

All the implants used were 3.5mm thick, and 10-16mm long. In our patients, we mostly used implants with 16mm length, 58.1%, than 14mm or 17.1% and 10 mm or 16.2% (Diagram 2).

At the research group, the average time of placement of the bridges in the lower jaw was 2 months, and at the control group 4.2 months. In the upper jaw, the average time of placement of the bridges, at the research group was 3 months and at the control group 5.4 months. (Table 3, Diagram 3).

Jaw	Time month Mean (SD)		T test pvalue
	Research Gr. n=23	Control Gr. n=6	
Lower	2 month(±0.1)	4.2 month(±0.5)	ttest=3,50 p=0,0045
Upper	3month(±0.1)	5.4 month (±0.6)	ttest=2,95 p=0,035

Table 1. Average time of placement of the dental bridge after implanting based on groups.

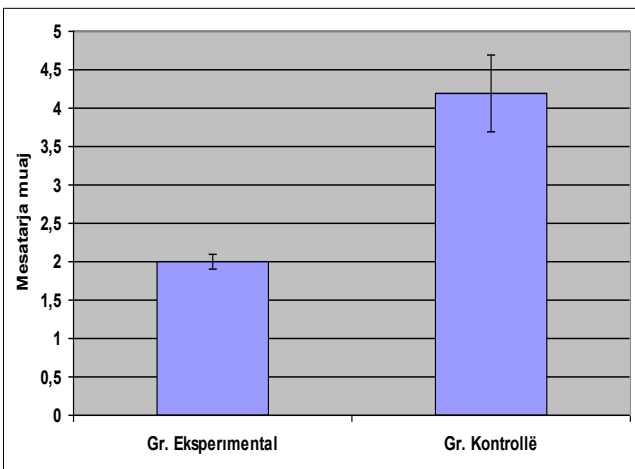


Diagram 3. Average time of placement of bridges in the lower jaw.

With case distribution based on gender, out of 23 cases in the first group, or 52.2% were female, and 11 of 47.8% were male, while in the control group we had 3 females and 3 males, but without important statistical significance (Chi test= 1.734, p=0.1879).

The patients included in the research were of age 30.59 years old. A higher structure of 52.2% was of age 30-39 years, then 40-49 years were 30.4% and 50-59 years were 17.4%.

With case distribution based on the group-age and gender, we have gained difference with statistically important significance (Chi test= 12.5, p=0.0078)

There were more females in the group-age 30-39years (58.3% vs. 45.5%), while men in the group-age 40-49 years



Figure 7. Rebuilding over im-

Figure 8. Finishing the case – placing of porcelain bridges in both jaws.

5. CONCLUSIONS

Based on the analyzed materials, we came to the following conclusions:

With the case distribution based on gender, out of 23 cases in the first group, 12 or 52.2% were females and 11 or 47.8% were male, while in the control group we had three females and three males, but without significantly important statistical differences.

Patients involved in the research were the age 30-59 years old. In a higher structure of 52.2% were of group age 30-39 years, then 40-49 years were 30.4%, and 50-59 years were 17.4%.

With the distribution of cases based on group-age and gender, we gained significant statistically important difference (Chi test = 12,5, p= 0,0078).

We had more females in the group age 30-39 years (58.3% vs.45.5%), while men in the group=age 40-49 years (25, 0% vs. 36,4%) and 50-59 years (16,7% vs. 18,2%).

All the implants used were TIOLOX, 3.5mm wide and 10-16mm long. In our patients, mostly were used implants of 16mm length, 58.1%, then 14mm 17.1%, and 10mm 16.2%

Implants based on regions, mostly were placed in the inter-canine region 58.1% and 41.9 % in the trans-canine region.

At the research group, the average time of placement of bridges in the lower jaw was 2 months, (SD ± 0,1 month), and at the control group was 4.2 months (SD ± 0,5 months).In the upper jaw, the average time of placing the bridge at the research group was 3 months (SD ± 0,1 month) and at the control group 5.4 months (SD ± 0,6).

At the end of this scientific study, from the cases we have worked on, we can conclude that the period after placing the implants until the placement of the prosthetics could be shortened from 4-6 months for the upper jaw to 3 months, and

From 3 months for the lower jaw it could be shortened to 2 months, based on the coexistence of the bone and the primary stability of the implant.

CONFLICT OF INTEREST: NONE DECLARED

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