



Monika Puzio, Artur Blaszczyzyn, Marzena Dominiak
 Department of Dental Surgery, Silesian Piast Medical University of Wrocław, Poland

Comparative ultrasound assessment of keratinized gingiva thickness around implants after the augmentation treatment in esthetic zone- preliminary results

SUMMARY:

Implantation in the aesthetic zone is demanding procedure, both in terms of functional and aesthetic. In order to achieve long-term stable therapeutic effect, keratinized gingiva of implants should be thicker than the one of the natural teeth.

OBJECTIVES:

Comparative, ultrasound evaluation of the thickness of keratinized gingiva around implants before and 3 months after augmentation gingiva by means of connective tissue graft and collagen matrix Mucograft® (Geistlich®).

MATERIAL AND METHODS:

43 patients, including 27 women with single or double missing teeth. Tapered implants were inserted- 49 Conelog® (Camlog®). In 43 cases- single and in 6 cases a double missing teeth were supplemented.

Patients were divided into 3 groups according to the implemented method of augmentation:

- I group without augmentation gingiva
- II group of thickened gingiva 3 months before implantation
- III group of thickened gingiva 3 months after implantation

Groups II and III were divided into two subgroups according to used material:

- a) collagen matrix Mucograft® b) connective tissue graft

Patients underwent:

1. clinical examination before and 3 months after augmentation gingiva and
2. ultrasonography evaluating the thickness of keratinized gingiva at 3 points in place of a missing tooth using a device Pirop® (ECHOSON®, Poland):



1. in the middle of the line connecting CEJ's the adjacent teeth



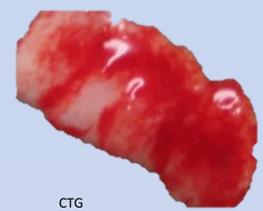
2. on the MGJ



3. on the alveolar ridge



Mucograft®



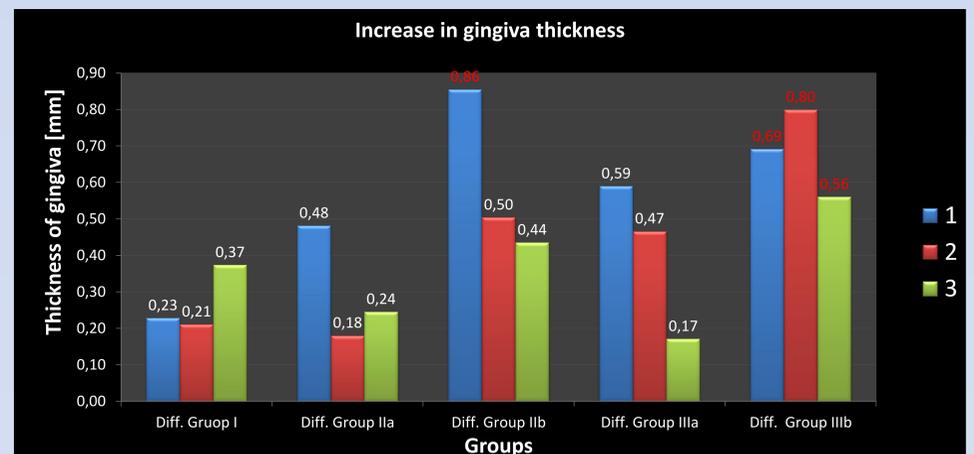
CTG

RESULTS:

In comparison of all groups the highest value of increasing thickness of gingiva in 3 measurement points in IIIb group (with connective tissue graft 3-month after implantation) was recorded (the differences were at a point 1-0.69, 2-0.80, 3- 0.56).

The greatest thickness of gingiva in 1 measurement point was observed in IIb (0.86).

In Mucografts group the higher increase was recorded in IIIa group.



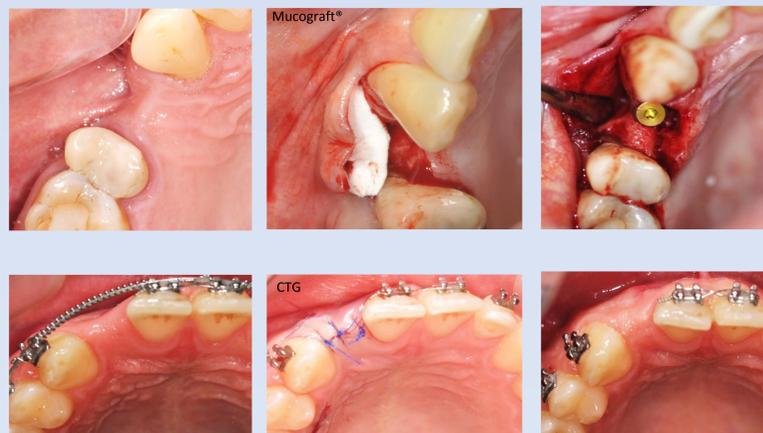
Group I

Control group without soft tissue augmentation



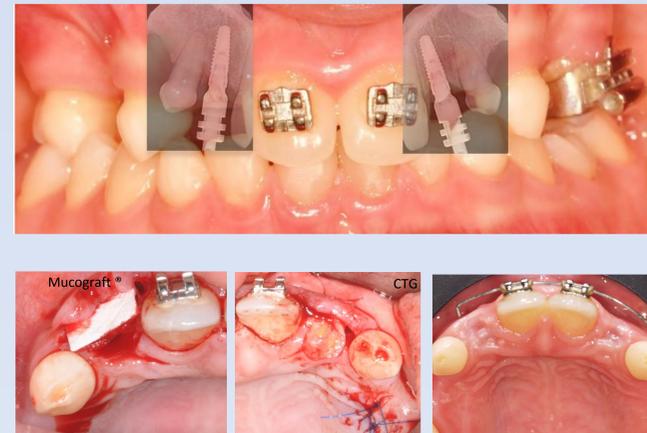
Group II

Soft tissue augmentation 3- month before implantation



Group III

Soft tissue augmentation 3- month after implantation



CONCLUSIONS:

Both CTG and Mucograft® has the effect of increasing gingiva thickness, but higher values have been recorded after augmentation surgery with CTG. In thin biotype when keratinized gingiva is thinner than 2 mm, implant surgery of keratinized gingiva is required. The guidelines for working with matix Mucograft® must be observed and obeyed.