## 40 implants within 8 weeks (I)

# Study of the ISQ evolution in 40 implants within 8 weeks of its placement ((1) Length and Width)

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### Object

The main purposes of this study are:

1. To assess whether there is variation in the ISQ measures during the osseointegration period.

- 2. To evaluate how implant length can influence the ISQ values.
- 3. To assess whether the implant diameter affects the ISQ measures.

### **Materials and Methods**

From January to June 2014, 28 patients were treated with implants Anyridge (Megagen Implant Company). Implants placed on mature bone, and immediate placement post extraction implants were included in the study. To homogenize the sample, the following patients were excluded from the study: patients treated with GTR prior to implant placement, implants placement in patients treated with sinus lift. In 28 patients, with no medical history of interest and with a mean age of 58.29 years (range 45-72), 40 implants Anyridge (Megagen Implant Company) were. Distributed in length and width according to table1. Immediately after placing the implant , a measure of AFR (ISQ1) was performed with appliances designed for this purpose (Osstell Mentor; Integration Diagnostics AB, Goteborg, Sweden), following the manufacturer's instructions. 4 weeks (ISQ1m) and 8 weeks (ISQ2m) after the implant placement, another measure was done in similar conditions.



### **Results**

## Does the implant length have an influence on the ISQ values?

ISQ values above 68 ocurred in the 57,5 % of the cases. No correlation with the implant length was found. The gain values of more than 8 points between the first and the last measurement at two months occurred in 8,5 mm (25%), 10 mm . (35%) and 11,5 mm (66,6%) implants. Average values of ISQ were: 8.5 mm implants, 66,3 (range 63,9-69); 10 mm implants, 64,4 (range 61,35-68) and 11.5 mm implants, 63,9 (range 60-68,5). 8 weeks after the implant placement , is observed that the longer the implant length, the gain at 4 and 8 weeks is greater. This increase is higher in the period from 4 to 8 weeks compared with the values from baseline to 4 weeks (Table 2). Are there differences in the ISQ measures depending on the implant diameter? The highest ISQ values were obtained in 4mm (range 64-77 ISQ2 = 69.05) and 5 mm (ISQ2 70,400 range 68-73) diameter implants. Similar results were observed in 4.5 mm diameter implants. (Table 3)

### Conclusions

- 1. There was no change in the stability of the implants from the day of surgery until 8 weeks after.
- 2. At 8 weeks, stability levels that allow you to start prosthetic loading are achieved.
- 3. 4-mm diameter Implants was the group that highest ISQ values obtained in relation with the implant diameter.
- 4.The values of higher gain (9) at 8 weeks were obtained in 10 mm ength implants, although no significant values were found in relation to the implant length.

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ISQ Values			
	Start	4 weeks	8 weeks
3,5	58,5	61,6	66,2
4	62,5	64,9	68,6
4,5	60,4	63,8	67,5
5	66,8	66,8	67,2