# 40 implants within 8 weeks (II)

# Study of the ISQ evolution in 40 implants within 8 weeks of its **placement** ((2) Maxilla / Lower Maxillary)

E.Padullés-Roig MDD, DDS. - C. Padullés-Gaspar DDS. – E.Padullés-Gaspar DDS

Institut Odontología Integral Barcelona

#### Object

This study aimed to evaluate if the implant stability at the time of its placement, at 4 and 8 weeks after its placement is influenced by the localization of the implant (mandible and maxilla).

#### **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 placed. 19 implants were placed in the maxilla and 21 in the jaw. Distributed in length and width according to table 1. 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.

						Table 1
	W 3.5	W 4	W 4.5	W 5	W 6	Total
L 7					2	2
L 8.5		3	5	3	1	12
L 10	5	11	2	2		20
L 11.5	3	3				6
Total	8	17	7	5	3	40

ISQ exceeding 65

## Results

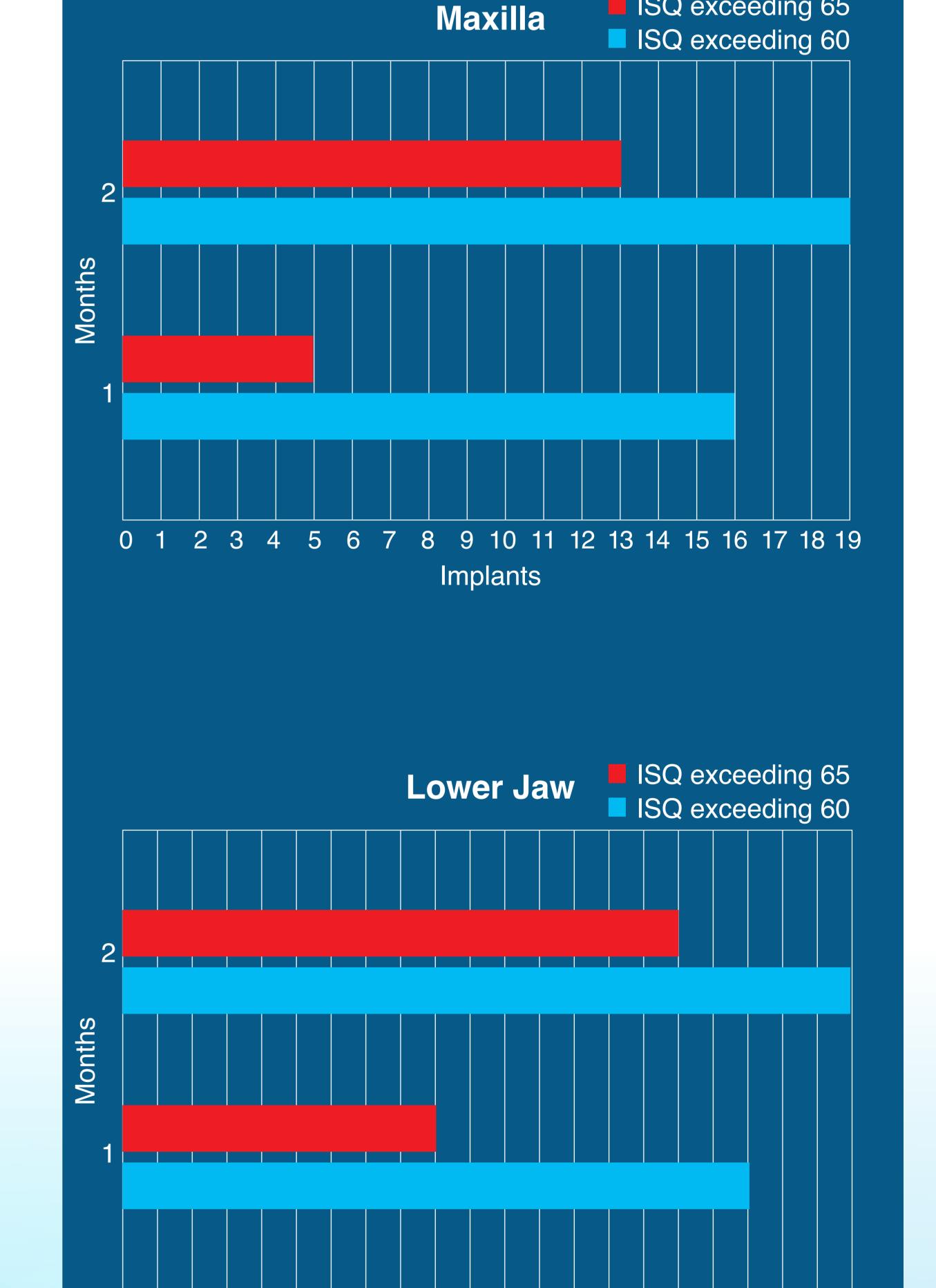
- Regarding the location of the implant, the ISQ was greater in the lower jaw than in the maxilla.
- The average at 8 weeks was 67.4 (range 63-71) in maxilla, and 68.7 (range 63-77) in the lower jaw.
- In the maxilla, at 4 weeks, 73% (16) of the implants exceeded 60 ISQ value and 26,3% (5) exceeded 65.
- At 8 weeks, 100% of the implants exceeded 60 ISQ value and 68,42% (13) exceeded 65. (Table.2)
- In the lower jaw, 85.71% (18) of the implants exceeded 60 ISQ at 4 weeks and 100% at 8 weeks.
- 42.85% (9) of the implants exceeded 65 IQS values at 4 weeks and 76,19% (16) at 8 weeks (Table. 3)
- 3.5 mm diameter implants showed the lowest values in both maxilla and jaw.

# Conclusions

- 1. ISQ was greater in the mandible than in the maxilla. The average in the maxilla is from 63.63 (4 weeks) to 67.42 (8 weeks); In the lo wer jaw 65.04 (4 weeks) and 68.76 (8 weeks)
- 2. At 8 weeks, stability levels that allow you to start prosthetic loading are achieved in both, mandible and maxilla.

## References

• Horwitz J, Zuabi O, Peled M. Resonance frequency analysis in immediate loading of dental implants. Refuat Hapeh Vehashinayim 2003; 20: 80-88. • Jürgen Zix y cols. Stability measurements of 1-stage implants in the maxilla by means of AFR. Int J Oral Maxillofac Implants 2005; 20:747-752. • Park CJ, Kim YS, Kim CW, Cho LR, Yi JY. A study on the change of implant stability using resonance frequency analysis. J Korean Acad Prosthodont 2003; 41: 271-287. Boronat A, Peñarrocha M, Martínez O, Mínguez I. Estudio del análisis de frecuencia de resonanci a tras la colocación de 133 im- plantes dentales. Med Oral Patol Oral Cir Bucal 2006; 11: 272-276. • Nawas B, Wagner W, Grötz KA. Insertion torque and resonan- ce frequency analysis of dental impl ant systems in an animal model with loaded implants. Int J Oral Maxillofac Implants 2006; 21: 726-732. Ostman PO, Hellman M, Sennerby L. Direct implant loading in the edentulous maxilla using a bone density-adapted surgical protocol and primary implant stability criteria for inclusion. Clin Implant Dent Relat Res. 2005;7Suppl 1:S60-69.



6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 Implants