with 72 external connection Galimplant® implants with a sandblasted and acid etched surface. In each patient 4 implants were inserted. The implants were functionally loaded with a locator attachment after an 8-week period.

**Results:** 18 maxillary overdentures anchored on 4 implants were made. Early complication were found on the unloaded healing period, caused by an implant that was removed due to mobility. These results indicate a 98.7% survival and success rate after an average following time of 63.7 months (range: 54-80). The average bone loss was 0.9mm (0.4-1.7mm). The prosthodontics complications were related to attachment changes in 2 patients (11%).

**Conclusions:** The clinical findings of the present study indicate that maxillary overdentures using 4 implants represent a successful implant technique in the oral rehabilitation of completely edentulous geriatric patients.

**- Oral Presentation 37**

**TITLE:** Implant-supported fixed prostheses with submerged implants in geriatric mandibular edentulous patients

**AUTHORS:** Jiménez Guerra A, Matos Garrido N, España López A, Ortiz García I, Nuñez Márquez E, Velasco Ortega E.


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**Introduction and Objectives:** Fixed oral rehabilitation represents a form of implant treatment in patients with a long period of fully edentulous. The aim of the study was to show the evaluation of fixed rehabilitation on implants in geriatric patients with edentulous mandible.

**Materials and Methods:** 28 mandibular edentulous patients were treated with fixed implant restorations with 270 Microdent submerged, external connection, sandblasted implants. Implants were inserted during sinus lift. Implants were loaded after a healing free-loading period of 6 months. The clinical follow-up was at least 60 months after functional loading.

**Results:** 28 fixed screw and cemented rehabilitations were performed. The mean clinical follow-up was 90 months. Complications occurred in 6 patients. 7 implants (2.6%) presented peri-implantitis, but no lost. 4 implants (1.5%) were lost, consequently the success rate was 98.5%.

**Conclusions:** The clinical findings of this study indicate that fixed oral rehabilitation on implants in the mandible have a high success rate in geriatric patients.

**- Oral Presentation 38**

**TITLE:** Bilateral maxillary sinus floor elevation in geriatric patients. A 5-year clinical study

**AUTHORS:** Matos Garrido N, Jiménez Guerra A, España López A, Ortiz García I, Nuñez Marquez E, Velasco Ortega E.


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**Introduction and Objectives:** atrophy of maxilla represent an important challenge in the implant treatment of geriatric patients. Today, maxillary sinus elevation constitute a surgical technique for the insertion of implants in these cases. The aim of this study was to report the outcome of treatment with dental implants inserted by sinus lift with use of biomaterials.

**Materials and Methods:** 15 patients with tooth loss were treated with 70 Microdent ® implants with sandblasted surface for the rehabilitation by sinus lift. In all cases, beta-tricalcium phosphate KeraOs® were used. Implants were inserted during sinus lift. Implants were loaded after a healing free-loading period of 6 months. The clinical follow-up was at least 60 months after functional loading.

**Results:** 30 bilateral sinus lifts were performed. 10% of patients showed complications, specially membrane perforation. Clinical results indicate a survival and success rate of implants of 98.6%. One implant was lost during the healing period. After a mean functioning period of 67.4 months, no late complications were reported. Results of this technique with the use of a synthetic biomaterial are similar to another studies that demonstrated a predictability and safety.

**Conclusions:** The clinical findings of this study indicate that sinus floor elevation constitute an implant option in the treatment of maxilla atrophic in older patients.

**- Oral Presentation 39**

**TITLE:** Insertion of implants by bone expansion technique in geriatric patients with a severe horizontal reduction of alveolar crest

**AUTHORS:** Muñoz Moreno J, Matos Garrido N, Jiménez Guerra A, España López A, Ortiz García I, Velasco Ortega E.


Introduction: The aim of this study was to report the outcome of treatment with dental implants inserted by bone expansion technique in geriatric patients.

Material and Methods: 46 patients with tooth loss were treated with 107 Galimplant® sandblasted and etched acid surface implants for rehabilitation by bone expansion technique. Implants were loaded after a healing free-loading period of 3-6 months according insertion in mandible or maxilla. Clinical follow-up were of 48 months.

Results: Clinical results indicate a survival and success rate of implants of 98.2%. 2 implants were lost during the healing period. 79.4% of implants were inserted in maxilla and 20.6% in mandible. No late complications were reported. 95.6% of patients were restored with fixed prostheses and 4.4% with overdentures.

Conclusions: This study indicate that treatment with dental implants by bone expansion constitute an alternative successful implant treatment in older patients.

- Oral Presentation 40

TITLE: Selection of the optimal method of image processing intended for masticatory performance assessment

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Objectives: The masticatory performance (MP) is an objective indicator of the oro-facial functional capabilities, used for evaluating the impact of oral prosthetics, neuro-muscular disorders in the elderly, and impairments after a stroke. The MP can be measured by means of Image Processing Methods (IMP) for quantifying the mixture of chewing gums subjected to mastication; however, just a few IMPs have been tested, and no comparative studies have been reported. The aim of this study is to present a procedure for the selection of the optimal IMP for a given test-food characteristic.

Materials and Methods: For this purpose, 250 reference dentate participants (25 ± 6,3 years) masticated chewing gums for 2,6,9,12,15,18,21, and 25 cycles (2000 samples). The samples were analysed using 122 different IMPs consisting of colour, histogram, and texture feature extraction procedures. The IMPs were evaluated following the criteria of normality of measurements, ability to detect difference among mixing states, and moderate-to-high correlation with the number of cycles. The optimal IMP was chosen by following a Multiple Criteria Decision Analysis procedure (MCDA).

Results: Measurements provided by all IMPs proved to be normally distributed, 116 proved sensible to mixing states, and 35 showed moderate to high correlation with the number of cycles. The variance of the histogram of the Hue showed the highest MCDA score (optimal IMP).

Conclusions: The proposed procedure has been proved reliable and able to select the optimal approach among multiple IMPs.

- Oral Presentation 41

TITLE: Hybrid prosthesis or overdentures. Which to choose in our elderly the cantilever predicament

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Introduction: The demand for greater prosthetic stability by patients with complete denture is a constant in the daily clinical practice. Limiting bone and economic factors, among others, has made the treatment of choice in many cases are hybrid prosthesis or overdentures. Frequently in clinical practice are unclear factors to consider, so the aim of this review is:

1. Concept and overdentures differences - hybrid prostheses.
2. Aspects for restorative choice.
3. Determine situation more favorable position and extent of the cantilever.

Material and Method: Referring to treatment with implants and performing various types of prosthesis - to respond to these objectives a literature review consulted 56 articles indexed systematic review pertaining to impact journals published between 2014 – January 2016 type arises being for it keywords: protheses implant overdenture, biomechanical, hybrid implant protheses,