

MEETING ABSTRACT

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# Current prospective management of patients with osteonecrosis drug-induced (bisphosphonates) of the jaws: our experience

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## Background

Bisphosphonates (BP) are frequently used for the treatment of multiple myeloma, bone metastasis and for osteoporosis, the most used are Alendronic and Zolendronic acids (1). This type of drugs, especially Zolendronic acid, pointed out a serious side effect: osteonecrosis of the jaws (ONJ). It is demonstrated they reduce bone turn-over and induce apoptosis of the osteoclasts. BP have remarkable ability of anti-angiogenesis, that together to micro-traumas and inflammations, it can be a contributory cause of the ONJ onset.

Patients can remain asymptomatic even for a long time, but secondary infection of the bone exposed due to teeth extraction or other surgical procedures cause pain (2), soft tissue swelling, purulent collections that can drain in the mouth or outside.

## Materials and methods

In Department of Maxillo-Facial Surgery, from January 2003 to September 2009, it has been observed 84 patients with ONJ. 56 are included in our screening program: 50 patients were treated for cancer with acid Zolendronic, 6 for osteoporosis with Alendronic acid; the ONJ location was in the 24 pz (43%) the upper jaw, in 30 (54%) the mandible, in 2 (3 %) both. ONJ developed in 31 pz (54%) after tooth extraction, in 15 (28%) due to dental prosthesis micro-traumas, in 10 (18%) it was spontaneous. Following the AAOMFS classification (Table 1), 5 patients (8,9%) were in stage Ia, 2 (3,6%) in stage Ib, 22 (39,3%) in stage IIa, 4 (7,2%) in stage IIb, 12 (21,4%) in stage IIIa, 11 (19,6%) were IIIb.

## Results

The results are indicated in Table 2: in 10 patients the results aren't satisfactory; 26 show clinical condition

**Table 1 (AAOMFS)**

Stage 0 (sub-clinic stage)
Stage I (bone-exposure without pain and infection)
a lesion < 1cm
b lesion > 1cm
Stage II (bone-exposure with pain and infection)
a lesion < 2cm
b lesion > 3cm
Stage III
a bone-exposure > 3cm with clear osteolyses
b pathological fractures; ect.

In stage I treatment was performed with clorexidina 0,2%, in stage II or III antibiotic-therapy and clorexidina, in stage IIIb surgical therapy. In 18 pz we have associate PiezoSurgery system, which exploits the ultrasounds action, effective on the bone but absolutely atraumatic on the soft tissue.

**Table 2**

Patients Number	Initial Stage	Final stage
*3	*Ia	*Ia
*10	*IIa	*IIa
*4	*IIIa	*IIIa
*9	*IIIb	*IIIb
# 2	#Ia	#IIa
#6	#IIa	#IIb
# 2	#IIb	#IIIa
^5	^IIa	^Ib
^2	^IIb	^Ib
^8	^IIIa	^IIb
^ 2	^IIIb	^IIb
+2	+Ib	+0
+1	+IIa	+0

\*n. 26 clinical condition stationary

#n. 10 worsted

^n. 17 improved

+n. 3 clinically free from disease

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**Figure 1** stage IIIa; after 6 months of treatment the clinical condition are stationary (antibiotic-therapy + PiezoSurgery system)



**Figure 2** stage IIIa to IIa, the clinical condition are improved after 8 months of Treatment (antibiotic-therapy + PiezoSurgery system)



**Figure 3** stage IIa to 0, clinical free from disease after ten months of treatment (antibiotic-therapy + PiezoSurgery system)

stationary (Figure 1); 17 are improved (Figure 2); 3 are completely recovered (Figure 3) .

### Conclusions

To date management of ONJ patients is difficult for the prognosis and therapy, especially for several cases.

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### References

1. Marx RE, Swatari Y, Fortin M, *et al*: Bisphosphonate-induced exposed bone (osteonecrosis/ osteoporosis) of the jaws: Risk factor, recognition, prevention and treatment. *J Oral Maxillofac Surg* 2005, **63**:1567.
2. Vescovi P, Manfredi M, Merigo E, Meleti M: Early surgical approach preferable to medical therapy for bisphosphonate-related osteonecrosis of the jaws. *J Oral Maxillofac Surg*. 2008, **66**(4):831-2.

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