

# Osteonecrosis of the Jaws: The Awareness of the Patient at Risk

Édila Figuerêdo Feitosa Cavalcanti<sup>1</sup>, Alessandra Oliveira Ferrari Gomes<sup>2</sup> and Sandra Regina Torres<sup>2\*</sup>

<sup>1</sup>Department of Internal Medicine, Clementino Fraga Filho University Hospital, Universidade Federal do Rio de Janeiro, Brazil

<sup>2</sup>Department of Oral Pathology and Diagnosis, Dental School, Universidade Federal do Rio de Janeiro, Brazil

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\*Corresponding author : Departamento de Patologia e Diagnóstico Oral Faculdade de Odontologia (FO/UFRJ). Av. Carlos Chagas Filho, 373 - Prédio do CCS - Bloco K-2º andar-Sala 56. Ilha da Cidade Universitária-Rio de Janeiro/RJ-CEP: 21.941-902, Brazil, Tel: +55 (21) 3938-2012 / +55 (21) 99644-7676; Email: sandratorres@odonto.ufrj.br

## Abstract

Individuals under anti-angiogenic or antiresorptive bone medications are in risk to develop medication related osteonecrosis of the jaws (MRONJ). The most common trigger event that can lead to MRONJ is bone manipulation, such as dental extraction. Thus, a proposed consent form to be use by clinicians attending individuals at risk of development of MRONJ is proposed. Three clinicians with experience in dental treatment of individuals exposed to anti-angiogenic or antiresorptive-reabsorptive bone medications developed a consent form based on technical and scientific content. A clear and simple text was elaborated for patient's knowledge and consent registration. Clinicians should always inform patients about the condition and the risks of the procedures during dental treatment, and those individuals in risk to develop MRONJ should sign a consent form, before invasive procedures are performed.

**Keywords:** Jaws; Bisphosphonate-Associated Osteonecrosis of the Jaw; Consent Forms

**Abbreviations:** MRONJ: Medication Related Osteonecrosis of the Jaws

## Introduction

The medication related osteonecrosis of the jaws (MRONJ) is characterized by a pathological condition of necrotic bone that does not heal within 8 weeks. Patients without a medical history of head and neck radiotherapy and who have taken anti-angiogenic or antiresorptive bone medications (bisphosphonates and RANKL inhibitors) are at risk of developing this condition [1]. Because it represents an important complication that causes limitations to people who develops it, the importance of spreading this information to physicians and dentists is crucial [1]. A small percentage of people who take these drugs develop spontaneous MRONJ. However, most patients who undergo an invasive dental treatment have a higher risk to develop MRONJ. Therefore, it seems imperative that patients be aware about the side effects of these drugs associated to invasive dental treatment and the risk of developing MRONJ. The role of preventive dental treatment [2] and the consciousness of a good oral hygiene must be encouraged in patients.

Infectious or inflammatory odontogenic diseases also represent risks of MRONJ [3]. Consequently, in case of any invasive dental treatment for treatment of dental infection, the patient needs to be aware of the risks and to participate in the decision of the treatment, by signing a written consent form. A clear and simple

written text is recommended for the registration of the informed consent, as suggested below. "I,..., patient of the health service..., registration number..., have been taking or have already taken at least one of the drugs:

- A. Zoledronic acid (Zometa®, Reclast®)
- B. Aledronate (Fosamax®)
- C. Disodium pamidronate (Aredia®)
- D. Disodium clodronate (Clasteon®, Bonefos®)
- E. Risedronate sodium (Actonel®)
- F. Tiludronate sodium (Skelid®)
- G. Ibandronate sodium (Boniva®)
- H. Etidronate (Didronel®)
- I. Incadronate disodium (Simagchem®)
- J. Denosumab (Xgeva®)
- K. Sunitinib (Sutent®)
- L. Sorafenib (Nexavar®)

M. Bevacizumab (Avastin®)

N. Sirolimus (Rapamune®)

I'm aware this drug was prescribed by my doctor to treat my disease. I was informed by the dentist that this medication might cause osteonecrosis of the jaws, in case any kind of surgery is performed, such as, teeth extractions and other small oral surgeries. I was also warned that untreated oral infections may also represent a risk for osteonecrosis. All things considered, I acknowledge participating in the decision concerning my oral treatment and I authorize the dental care suggested by the team."

Another important measure is the storage of imaging exams and photographs in order to register, and follow-up each case. Everyone in the health care team of individuals using these drugs should be involved in the process, and the risks for developing MRONJ must

be considered. In cases where MRONJ occurs, the utmost treatment must be initiated and patient must be followed until resolution of the problem, controlling and minimizing the consequences of the condition.

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