

The surgical management of oncologic patients affected with intravenous bisphosphonate related osteonecrosis of the jaw

Marco Mozzati^{1,2}, Giorgia Gallesio^{1,2} and Valentina Arata^{1,2}

¹San Giovanni Battista Hospital, Italy

²Oral Surgery Department, Italy

Intravenous Bisphosphonate (IB) therapy has been considered standard therapy in the management of patients with pathologies characterized by metabolic imbalance involving high bone turnover and increased bone resorption such as malignant hypercalcemia, bone metastasis associated with solid tumors and multiple myeloma. The efficacy of these drugs is due to their ability to inhibit osteoclast-mediated bone resorption. However, in the past years the therapy with these drugs has raised concerns about potential side effects related to profound bone remodeling inhibition that can provoke Bisphosphonate Related Osteonecrosis of the Jaw (BRONJ). BRONJ is defined as an avascular area of necrotic bone in the maxillofacial area, with or without exposed bone, that has been evolving for more than eight weeks, in patients without a previous history of irradiation in the maxillofacial region. The onset of BRONJ is often subtle, and if neglected can progress involving large part of maxillary and mandibular bone with increasing complications. Currently, BRONJ management remains controversial, and there is no definitive standard of care for this disease, maybe also because the exact BRONJ pathogenesis has not yet been established and seems to involve several mechanisms including both hard and soft tissue damage. Consequently, surgical protocols that favor both bone and mucosal healing processes while concurrently limiting surgical damage must be researched and adopted for patients who are treated with IBPs. That's why the use of autologous plasma rich in growth factors (like PRGF or PRP System) seems to offer several advantages in the surgical management of patients treated with IB. The rational base of their use rests on the assumption that the growth factors in PRP are a supplementary source of stimulation to the physiological deficit, and promote angiogenesis as well as bone and mucosal wound healing. In our experience oral surgery management of these patients have shown significant better results if associated with the application of PRP both in the prevention of BRONJ, when used in teeth extraction, and in BRONJ surgery.

Biography

Marco Mozzati was Graduated in Medicine and Surgery in 1986 and specialized in Dentistry at the University of Turin in 1990. Since 1987 he has been operating at hospital departments mainly with a surgical or implant-prosthesis orientation, and in private practice in Turin. From 1998 to 2004, First Level Medical Manager at the Department of Oral Rehabilitation and Maxillo-Facial Prosthetics and Dental Implants by Prof. Giulio Preti. From 2002 he is Consultant in Trauma Center in Turin where he did specialistic performances on patients who had severe facial traumatism.

Since 2004 he worked as a Professor of Oral Surgery at the Degree in Dentistry and in 2005 at the Degree in Dental Hygiene, University of Turin.

Since 2005 he worked as a Medical Director Head of SSCVD Oral Surgery Hospital in Turin at the Department of Oral Rehabilitation and Maxillo-facial Prosthetics and Dental Implants by Prof. Stefano Carossa. Medical Director Head of Service for the treatment of patients awaiting organ transplantation and patients in therapy with bisphosphonates and Since 2009 Professor of Clinical Stomatological Semeiotics at the Graduate School in Oral Surgery at the Faculty of Medicine and Surgery San Luigi Gonzaga.

Founding member Piezosurgery Academy. Active member SICOI (Italian Society of Oral Surgery and Implantology). He is Author of scientific articles related to oral surgery and implantology and managed as a Speaker at numerous courses, conferences and evening updates.

marcomozzati@libero.it