

3<sup>rd</sup> Euro Congress and Expo on

# Dental & Oral Health

June 16-18, 2015 Alicante, Spain

## The role of pediatric dentist in the treatment of children undergoing T.M.O. (Bone Marrow Transplantation)

**Simona Tecco**

University Vita-Salute San Raffaele, Milano, Italy

In 2005 the Foundation San Raffaele del Monte Tabor, Milan (Italy) has undertaken a cooperation with the Mediterranean Institute of Hematology (IME), a National Foundation founded by the initiative of the Ministry of Health, Ministry of Foreign Affairs, Ministry of Economy and the Lazio Region of Italy for the Bone Marrow Transplantation (T.M.O.) in beta-Thalassemie, as well as in other haematological malignancies. From September 2005 to April 2008 came at the Centre San Raffaele del Monte Tabor, Hospital San Raffaele (HSR), 43 patients including 42 with beta-Thalassemia and one with Sickle Cell Anemia, from Middle-East Countries. In 2005 also the task force of paediatric dentistry of HSR directed by Prof. Gherlone, has shown great solidarity in collaboration with the Department of Hematology providing all their skills in order to prevent and treat oral complications that could interfere with the success of the T.M.O. improving the control of oral side effects related to beta-Thalassemia. This clinical protocol of paediatric dentistry in the treatment of children undergoing T.M.O. will be exposed.

[tecco.simona@hsr.it](mailto:tecco.simona@hsr.it)

## Regenerative capacity of local intraoral adipose stem cell with demineralized bone matrix versus autologous bone harvesting in canine alveolar bone defects

**Lobna Abdel Aziz Aly<sup>1</sup>, Hala El- Menoufy<sup>2</sup>, Mahmoud Tag Elsabah<sup>3</sup> and Dina Sabry<sup>4</sup>**

<sup>1</sup>Associate Professor of Oral and Maxillofacial Surgery, Faculty of Dentistry, Future University

<sup>2</sup>Associate Professor of Periodontology, Oral Medicine and Oral Diagnosis, Faculty of Dentistry, Misr University for Science and Technology,

<sup>3</sup>Associate professor of Pathology, Faculty of Medicine, Faculty of Medicine, Misr University for Science and Technology,

<sup>4</sup>Professor of Medical Biochemistry, Faculty of Medicine, Cairo University, in Egypt.

**Background:** The limitations and morbidity associated with autogenous bone grafting have driven the search for predictable bone substitutes and bioimplants. Stem cells offer an interesting tool for tissue engineering, thus the purpose of this study was to observe and compare the regenerative capacity of artificial alveolar bone defect after autogenous bone grafting versus seeding of Adipose Tissue-Derived Stem cells (ADSCs) either alone or in combination with demineralized bone matrix (DBM).

**Methodology:** Standardized bilateral buccal dehiscence defects (4 × 3 × 3 mm) were surgically created in 24 healthy dogs and divided into 6 groups, Control group, Autogenous bone graft group, ADSCs group, ADSCs together with autogenous bone grafting, DBM group and finally ADSCs and DBM group. All animals were subjected to histological and histomorphometric analysis.

**Results:** Histologic and histomorphometric analysis within the same group revealed that the coronal mean values were higher in control, ADSCs with DBM and DBM groups and the apical values were higher in the three other groups.

**Conclusion:** This study demonstrated that the adipose derived stem cells with DBM have potential as a suitable alternative to autogenous bone in the treatment of alveolar bone defect.

**Keyword:** ADSCs with DBM, autogenous bone, alveolar bone regeneration

[lobna72@gmail.com](mailto:lobna72@gmail.com)