

Nanotechnology, Dentistry and Clefts of the Lip and Palate

The Editor,

Sir,

I read with great interest the article entitled 'Nanotechnology in Dentistry Today' (1), because the subject is topical today. Another related topic within dentistry is the applicability of the advances in tissue engineering combined with nanotechnology in the rehabilitation of clefts of the lip and palate.

In order to repair the bone defect caused by complete clefts of the lip and palate that affect the alveolar ridge, the alveolar graft technique with the use of recombinant human bone morphogenetic protein type-2 (rhBMP-2) has been widely used in the Hospital de Reabilitação de Anomalias Craniofaciais da Universidade de São Paulo (HRAC/USP), especially to induce proper bone formation in this region (2). Moreover, it presents success rates, similar to the conventional technique, which uses most commonly as filling material, autologous bone marrow-particulate fragments obtained from the iliac crest (2, 3).

In addition, it is worth noting that within the HRAC/USP, the alveolar graft technique with rhBMP-2 is performed between the ages of 9- and 12-year-old, so that with important additional advantages compared to the conventional technique. Its main features include less surgical morbidity, the absence of the physical limitation of the amount of bone available from the donor area, a reduction in the number of professionals in the surgical team and decrease in the length of stay (2). It is becoming a likely alternative in this phase of the treatment (2, 3) and has received good acceptance and satisfaction from patients and their families.

However, given the possibility of triggering more intense inflammatory reaction and, the consequent exacerbation of postoperative oedema (4), further investigations should be carried out to verify the magnitude of the influence of this clinical finding on the systemic health of these individuals, and not just on their surgical results.

Keywords: Cleft lip, cleft palate, nanotechnology.

MRT Palone

From: Hospital for Rehabilitation of Craniofacial Anomalies, University of São Paulo, Bauru, SP, Brazil.

Correspondence: MRT Palone, Department of Paediatric Dentistry, Hospital for Rehabilitation of Craniofacial Anomalies, University of São Paulo, Bauru, SP, Brazil.

Email: marcos_palone@hotmail.com

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