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#365 - Oral

Use Of Human Amniotic Membrane In The Treatment Of Patients With Bisphosphonate-Related Osteonecrosis Of The Jaws

Infection/medication related osteonecrosis

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Objectives

The use of bisphosphonates has given rise to a new pathology, namely BRONJ (bisphosphonate-related osteonecrosis of the jaws). It refers to an area of exposed bone that has not healed within 8 weeks of onset, in patients with a history of treatment with resorption inhibitors and no history of radiotherapy. To date there is no effective treatment for this pathology. Surgery is controversial and most patients are treated conservatively. The extensive use of and the results achieved by surgery with the amniotic membrane (AM) have highlighted its potential, including antimicrobial, anti-inflammatory, anti-fibrotic and anti-apoptotic properties, in addition to its capacity to promote epithelialisation and cell differentiation. These properties appear to support recovery in patients affected by BRONJ by facilitating wound healing after surgical debridement of the bone.

Methods

We report our experience with AM in 12 patients treated with AM patches harvested, processed and cryopreserved by the Fondazione Banca dei Tessuti di Treviso. The patients suspended treatment with bisphosphonates at least 1-2 months before the procedure and underwent antibiotic prophylaxis. The preoperative radiological studies were panoramic radiography (OPT) and computerized tomography (CT). Surgery was conducted under general and local anaesthesia (mepivacaine and adrenaline 1:200000). A crestal incision, including a fistulectomy, was performed in the mucous membrane, of sufficient length mesially and distally to expose the necrotic bone, according to the anatomical boundaries of the disease, as determined by the CT scan. The damaged teeth were extracted, followed by debridement/curettage of the necrotic bone. The AM was then applied and sutured with resorbable braided thread

Results

Follow-up to date, which envisages radiological controls and clinical assessments, has shown good epithelialisation in the absence of infections and painful symptoms.

Conclusions

In conclusion, the application of AM in patients affected by BRONJ appears to be a promising therapeutic alternative to currently available conventional treatments.