medicine. The aim of this study is to compare subcutaneous adipose tissue-derived stem cells (ADSCs) and dental pulp stem cells (DPSCs) in terms of their proliferation and osteogenic capacity *in vitro* and *in vivo*.
METHOD: 10 samples of the human dental pulp from third molars were selected and surgical removed for therapeutic reason in 7 patients of ISCCR San Raffaele Vita e Salute University Dental Clinic and D'Annunzio University of Chieti in orthodontic II & III malocclusion class treatment. 10 samples of adipocites stem cells were selected during liposuction aspirates fat removal procedures in human patients during obesity treatment. The samples were selected in homogeneous pool and subjected to citofluorimetric examination in order to evaluate and select an homogenous cluster of mesenchymal stem cells. Oil Red Oil and Alizarin Red staining in addition to real time PCR analysis of ALP and Runx2, was obtained in order to evaluate the proliferation and the osteogenic differentiation of the samples.
RESULT: The FACS analysis showed an homogeneous population of mesenchymal stem cells in all samples observed. The ADSCs showed an high proliferation rate than DPSCs. Alizarin red and Oil Red Oil staining revealed an qualitative higher number of cluster deposition than DPSCs. A larger number of cell colonies it was possibile to observed in ADSCs samples compared with DPSCs. The RT-PCR analysis showed an higher rate of ALP in ADSCs than DPSCs samples ($p < 0.05$).
CONCLUSIONS: The emerging evidence of our study suggests that the mesenchymal stem cells from subcutaneous tissue (ADSCs) could be a promising source of progenitor cells able to produce bone tissue in regenerative medicine and tissue engineering. However, several studies, will be particularly needed to confirm the opportunity to use ADSCs for dental tissue engineering, comparing their properties with other mesenchymal stem cells source.

Close of a fistula between the nose and the oral cavity using a new collagen matrix

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BACKGROUND: The aim of this study was to evaluate the use of a new collagen matrix (Mucograft®; Geistlich Pharma AG, Wolhusen, Switzerland) to improve the wound healing after bioptic excision. Often a bioptic excision of mucosal lesions is needed to perform an histological examination of the lesion. In some case after the surgery tissues can heal for secondary intention resulting in the presence of cicatrizations. It has been demonstrated that thanks to their compact structure, collagen matrices work as scaffold and they accelerate the migration of epithelial cells in the wound tissues. In fact reconstruction after rescission of mucosal biopsy requires the levy of a graft from the patients or healing by second- ary intention that often improve morbility. Nowadays, a new collagen matrix is available to avoid surgical grafts and improve the postoperatory confort.
METHODS: Mucograft® is a pure collagen type I and III matrix of porcine origin without further cross-linking. Up today, clinicians have been mainly focused on the use of Mucograft® in periodontal procedures, such as: treatment of recessions on teeth and implants and increment in the amount of keratinized gingiva. The effectiveness of this matrix for the use in the oral wound healing has already been validated by *in vitro* and *in vivo* studies. In fact, this porcine membrane stimulate an increased production of proinflammatory mediators in the mononuclear cells and a decreasement in cellular proliferation. In addition, a good proliferative activity of fibroblasts has also been seen, in both the layers of the matrix. In this work we report a case of a fistula between the nose and the oral cavity closed after the bioptical excision of the lesion and the positioning of the collagen matrix.
RESULTS: Histological examination stained with hematoxylin and eosin revealed that the lesion derived from a previous nasopalatine duct cyst. After 2 months from surgery a correct healing of the tissues was visible and a complete closure of the communication way was present.
CONCLUSIONS: We think this material should be well investigated for its use in oral mucosal surgery, due to its biological features that take it capable to improve both functional and aesthetic parameters.

Third mandibular molar coronectomy: the influence of the secondary wound healing

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BACKGROUND: Coronectomy is, an alternative surgical option to complete extraction for the treatment of high neurological risk third molars but some aspects of this technique require further investigation as the type of wound healing recommended to avoid or reduce post-operative infection. In fact, in literature there are no data describing the eventually complications related to a secondary healing or comparing the primary and secondary healing. The aim of this case series is to describe the post-operative morbidity related to a secondary healing after coronectomy.
METHODS: 5 patients on 100 treated with coronectomy developed a secondary intention healing due to a suture failure and included in this case series. These patients were screened for two years to evaluate the post-operative morbidity and complications related to this type of wound healing. Were considered as Post-operative complications: Iatrogenic Nerve Injuries (Any subjective post-operative sensory change); Second surgery, Dry Socket (severe pain, loss of the blood clot in the socket and wound breakdown) and Infection (swelling, pain, and pus).
RESULTS: On 100 high neurological risk mandibular third molars treated with coronectomy, 5 developed a secondary intention healing due to a sutures failure and were included in this study. Among these, 3 third molars were totally impacted and 2 were partially impacted.
No patients reported nerve damage. The complete closure of the alveolus of the 5 surgical sites with a secondary intention healing was observed 3 months after coronectomy. During the firt two post-operative years, No patients had post-operative infections, dry socket or pulpitis. In addition, all patients were asymptomatic, the retained roots were completely included and not detectable with a periodontal probe.
CONCLUSIONS: The importance of primary wound clo-