Review On Stem Cells In Regenerative Dentistry

Purpose: The aim of this article is to review application of stem cells in regenerative dentistry.

Materials and Methods: Article relating to application of stem cells in regenerative dentistry were gathered and evaluated.

Results: Dental tissues such as periodontal ligament, dental papilla are the sources for undifferentiated Dental stem cells can be used for treating dental diseases like periodontitis, dental caries and also improving dental pulp healing and regeneration of craniofacial bone and teeth.

Conclusion: Results of related studies reveal that dental stem cells are valuable tools for dental tissue engineering.

Therapeutic Efficacy Of Granulocyte Colony Stimulating Factor On The 5-FU-Induced Mouse Dermatitis

Purpose: In these years, Granulocyte colony stimulating factor (G-CSF) have attracted attention as a new approach for mucositis in foreign countries because it has found that G-CSF may have acceleration effects of epithelialization and mucosal protective effects. In the present study, we examine the effectiveness of Lenogranin against dermatitis as adverse effect of cancer chemotherapy.

Materials and methods: We tried to establish a model of 5-fluorouracil (5-FU) induced mouse dermatitis. We also administer Lenogranin (2μg/kg/day) for 3 days to mice with 5-FU-induced dermatitis subcutaneously and that examined the healing process of dermatitis histologically. Next, we tried to establish primary culture of fibroblasts derived from mouse back skin. We investigated the effects of Lenogranin on the growth of fibroblasts by MTT assay, on the migration of fibroblasts by Wound healing assay, on the cytokine expression related to healing acceleration by Western blotting.

Results: Lenogranin could promote the healing of 5-FU-induced dermatitis significantly. In addition, Lenogranin (0.5μg/ml) stimulate fibroblasts proliferation and their migration, and that enhanced bFGF expressions. Moreover Lenogranin administration increased bFGF expressions and decreased a-GA expressions in healing process of 5-FU-induced dermatitis.

Conclusion: These findings suggested that Lenogranin might promote the healing of 5-FU-induced dermatitis through the induction of bFGF expressions without fostering scar formations.