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Novel approach in the management of an oral premalignant condition - A case report

Sankaranarayanan S^{*1}, Ramachandran C¹, Padmanabhan J², Manjunath S³, Baskar S³, Senthil Kumar R³, Abraham S³.

¹Rajah Muthiah Dental College, Chidambaram

²Melmaruvathur Adiparasakthi Dental College, Melmaruvathur,

³Nichi-In Centre for Regenerative Medicine, Chennai, India,

⁴Yamanashi University, Faculty of Medicine, Chuo-shi, Japan

* Dr. S. Sankaranarayanan, HOD, Oral Pathology, Rajah Muthiah Dental College, Annamalai University, Chidambaram and Consultant, Kaveri Medical Centre, Tennur, Trichy, E.Mail: vedas72@hotmail.com

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Oral submucous fibrosis is a progressive oral disease first described by Pindborg and Sirsat 3 decades ago. It is a premalignant condition. The signs and symptoms depend on the involvement of the different sites in the oral cavity. The patient feels burning sensation for normal diet and trismus which may be so severe. If not properly treated the risk of malignant change in advanced cases of OSMF is relatively high. Wide ranges of treatment such as medical management, surgical therapy and physiotherapy have been attempted in the past, but none of them has proved to be a cure for this chronic fibrotic disease.

Histopathologically as the disease progresses, (i) change in the morphology of collagen, (ii) increased accumulation of amorphous collagen, and (iii) decreased collagen degradation results in decrease in number of blood vessels are observed in the affected area compared to the normal area. With an aim of bringing more blood supply to the affected area which is expected to bring more nutrients and help in collagen degradation, earlier application of vasodilators and studies

with curcumin have been done, but still with - no significant outcome.

As an alternative approach to improve the blood circulation, we have tried Autologous bone marrow stem cells which have been earlier applied in several diseases such as ischemic peripheral vascular diseases, ischemic heart diseases etc with proven improvement in angiogenesis.

A 38 year old patient with oral submucosal fibrosis, proven by histopathology, and endothelial markers was injected 175 million BMMNCs into the area affected. The parameters such as blanching, fibrous band have significantly improved, 4 weeks after the injection. We could observe positive changes clinically to prove the improvement. The mouth opening has improved to 35 mm from the previous 30.0 mm. Further histopathology and SEM studies with larger samples are done for establishing stem cell therapy's safety and efficacy.