

Autologous Bone Marrow stem cells for treatment of Oral Sub-Mucous Fibrosis - 2 case report with 2 yrs of follow up

INTRODUCTION

Oral Sub-Mucous Fibrosis (OSMF) is a chronic disease of insidious onset featuring the deposition of excess fibrosis tissues in the sub-mucosal layer of the pharynx, palate, fauces, cheek, lips, pharynx and esophagus. Due to this, lumen size of the vessels decrease and also a decrease in number of capillaries occur culminating in a decrease in blood supply to the epithelium in the affected region. The underlying muscles of mastication are also affected (Mokal et al. 2005) and it restricts the mouth opening. A more serious complication of the disease is the risk of the development of oral carcinoma (Nair et al, 2004).

It is generally accepted today that areca nut quid plays a major role in the etiology of the disease (Babu et al). The disease occurs mostly in India and in South East Asia but the cases have been reported world wide like Kenya, China, UK, Saudi Arabia and other part of the world where Asians are migrating (Tang et al, Shah et al). in 2002 the statistics for osmf from the Indian continent alone was about 5 million people.it should have doubled by now.

To date there is no report suggesting spontaneous regression and no widely accepted treatment. The following approaches have been tried, namely nutritional supplements, intralesional injections of placental extracts, corticosteroids, hyaluronidase and chymotrypsin, antioxidants and surgical excision of fibrotic bands with placement of grafts. Despite the application of several treatment modalities, none of them have produced satisfactory results.

No previous attempt is available in literatures about using Autologous bone marrow stem cell treatment for this disease.

Here we report our experience with two such case where autologous bone marrow mononuclear cells were injected with an aim of increasing angiogenesis to reverse the

pathological changes mentioned above.

Case selection and procedure.:

Case Studies : Autologous bone marrow stem cells.

First case;

A 43 yrs old male patient suffering from OSMF for the past 10 yrs who was treated 3 yrs before with cortisone injection and by other adjunctive medical management with no improvement was treated by this method. He had the complications such as severe burning sensation, difficulty in swallowing, severe blanching, restricted mouth opening of 30mm and xerostomia. Pre-injection biopsy was taken to confirm the pathology and also carcinoma was ruled out, 40 ml of Bone Marrow was aspirated from posterior iliac crest, transported in Acid Citrate Dextrose and was processed for mononuclear cells (MNC) by Ficoll density gradient centrifugation, following the cGMP protocols. The 4 mL of MNC concentrate containing 294 millions was injected intra orally at various sites in the affected area under local anesthesia. Stem cell isolation process is being done in NCRM lab Chennai.

Pre injection pictures. 30mm mouth opening only

