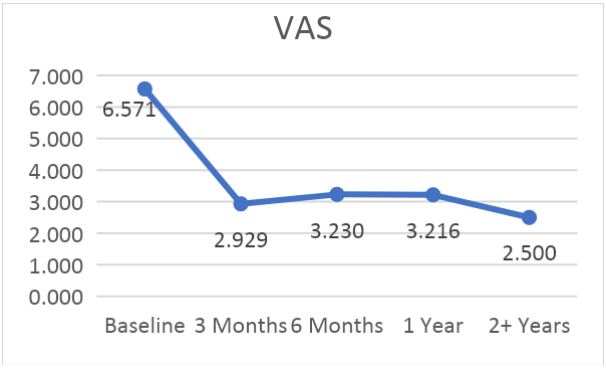
Title: The Effects of Autologous Stem Cells from Bone Marrow and Adipose Tissue on Patients with Knee Osteoarthritis

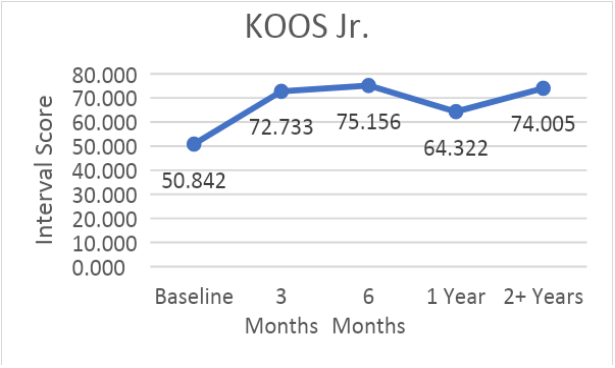
Name: Paul Eliot Hughes, M.D

Abstract

Osteoarthritis (OA), the most common type of knee degenerative arthritis, is the gradual loss of cartilage in the knee joint. A progression that leads to bone rubbing on bone causing functional difficulties, pain, and stiffness. Studies have shown stem cells contribute to a reduction of inflammation and pain associated with OA. This retrospective study collects data from patients who received autologous stem cell injections of bone marrow aspirate concentrate (BMAC) and/or adipose tissue (FAT). Patient-reported outcomes (PROs) regarding symptomatic functionalities were administered to gather a baseline and the progression of the knee joint on subsequent follow ups. Questionnaires included Visual Analog Scale (VAS), Knee Injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR), and a patient satisfaction. A total of 151 patients met clinical criteria, with 77 patients (BMAC 57, FAT 8, and BMAC & FAT 12) and 114 knees (BMAC 87, FAT 11, and BMAC & FAT 16) having appropriate follow up data. Of the 151 patients, nine patients had conversion to Total Knee Arthroplasty (TKA). BMAC, FAT, and BMAC & FAT groups showed significant improvement in both VAS and KOOS, JR when comparing baseline to 3 months, 6 months, 1 year, and 2 years follow up ($p < 0.001$). Data from these PROs display significant improvements in function, pain, and stiffness for patients with OA that received autologous stem cell injections.

Image:





Biography

Dr. Paul Eliot Hughes obtained his medical degree at Keck School of Medicine at the University of Southern California. He was the chief resident at George Washington University Medical School in Washington, D.C. At his orthopedic practice, Dr. Hughes assists his patients in surgical and nonsurgical treatment addressing chronic pain in the back, hips, and knees. He is highly experienced in innovative procedures, such as platelet-rich-plasma (PRP) injections and stem cell treatments.

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