

Plantar Fasciitis Treatment With Particulated Human Amniotic Membrane

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Introduction/Purpose: Plantar Fasciitis is the most common cause of heel pain in adults, and is estimated to affect nearly 1 million patients annually. Conservative treatments include rest, orthotics, night splint, stretching and non-steroidal anti-inflammatory drugs and are successful in nearly 90% of patients. However, more invasive treatments are required for patients whose symptoms persist greater than six months.

Fetal tissues, including the umbilical cord (UC) and amniotic membrane (AM) have been increasingly used to modulate healing in different parts of the body over the last two decades. These tissues have been demonstrated to possess anti-inflammatory and anti-scarring properties in addition to containing growth factors, cytokines, and matrix components to promote healing, and offer a potential therapy for plantar fasciitis.

Methods: In this series, we aim to evaluate the efficacy of cryopreserved, particulate UC/AM tissues as a treatment for plantar fasciitis as well as to determine if multiple injections provide an even greater benefit compared to a single injection. A multicenter prospective study was performed where patients were randomized to receive 25, 50, or 100 mg UC/AM tissue and either a single injection or two injections (at baseline and six weeks). All injections were administered under ultrasound guidance into the plantar fascia. At six, 12, and 18 weeks, patients returned and data on foot pain as well as the FAAM questionnaire were collected.

Results: Interim six-week data for 18 patients has been collected. Patient foot pain was found to be reduced by approximately 50% from baseline (7.1 to 3.5 on a 10 point scale). FAAM scores also improved significantly. All patients showed variable degrees of improvement with no patients showing any deterioration.

Conclusion: Hanselman et al evaluated the safety and efficacy of cryopreserved, particulate human amniotic membrane (cHAM) injections against a corticosteroid. They found cHAM injections safe and comparable to corticosteroids. In addition, the outcomes suggested a possible additive effect, with multiple injections of cHAM tissue showing a greater improvement in foot pain. The finding of our study are similar to the average verbal percentage improvement compared to baseline reported by Hanselman et al for the cHAM study group (46% improvement at six weeks). Overall, a total of 60 subjects will be enrolled in the present study.

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