

This abstract was submitted to DTRF for the September 2022 Int'l Research Workshop.

A PILOT STUDY OF INTRALESIONAL INJECTION OF TRIAMCINOLONE ACETONIDE FOR DESMOID TUMORS: TWO YEAR OUTCOMES

Benjamin K Wilke MD, Hillary W Garner MD, Joseph M Bestic MD, Courtney E Sherman MD, Lori A Chase MS, Michael G Heckman MS, Habeeba Siddiqui MS, Jennifer J Schoch MD, Steven Attia DO

Investigation performed at the Department of Orthopedic Surgery, Department of Radiology, and Division of Medical Oncology
Mayo Clinic, Jacksonville, Florida

Funding for this project was received from the Desmoid Tumor Research Foundation

(*) Denotes corresponding author:

Benjamin Wilke, MD, Department of Orthopedic Surgery, Mayo Clinic, 4500 San Pablo Rd. Jacksonville, Florida 32224, USA, Phone +1-904-953-2000, Email: wilke.benjamin@mayo.edu

Abstract

Purpose: Desmoid tumor is a challenging diagnosis that can be complicated by frequent local recurrences when treated with traditional methods. Corticosteroid treatment of desmoid tumor with triamcinolone acetonide has not been widely studied, but it has shown efficacy in the treatment of keloids and superficial fibromatosis, which are histologically similar to desmoid tumors. The purpose of this pilot study was to examine the clinical efficacy and safety of serial triamcinolone injections for the treatment of desmoid tumors.

Methods: Nine patients were enrolled into this prospective study and underwent three serial ultrasound-guided triamcinolone injections (120 mg) at six-week intervals. Magnetic resonance imaging (MRI) was compared at baseline and every 6 months, out to 24 months. Safety and tolerability were

assessed by clinical evaluation and questionnaires, including the 12-item short form survey (SF-12), visual analog scale (VAS), and desmoid patient-reported outcome (PRO) tool.

Results: Eight (88.9%) patients demonstrated a reduction in the volume of their tumor while one (11.1%) enlarged. The median change in tumor volume at 24 months was -26.9% (-81.1% to 34.6%, $P = 0.055$). All nine tumors remained stable based on WHO criteria, whereas two (22%) demonstrated partial response based on RECIST. There was a significant decrease in the mean signal intensity ratio of the contrast-enhanced images at 6 months ($P = 0.008$) and 24 months ($P = 0.004$). There was a similar decrease in the mean signal intensity ratio of the T2 images at 24 months ($P = 0.02$). We found no difference in SF-12 and VAS scores, but there were significant improvements in the desmoid PRO, specifically related to activity, fear, and anxiety.

Conclusion: Treatment of desmoid tumors with serial triamcinolone injections appears safe and well-tolerated by patients, with a 22% partial response rate based on RECIST criteria. Further research is needed to confirm our results and to determine factors predictive of response.