Cureus

Cooled Radiofrequency Denervation of the Axillary, Suprascapular and Lateral Pectoral Nerves in Chronic Shoulder Pain: Preliminary results of a retrospective study

Andrea Tinnirello [1] , Thomas Haag [2] , Carola Santi [3]

1. Anesthesia and Critical Care, ASSST Franciacorta, Brescia, ITA 2. Pain Management, Wrexham Maelor Hospital, Wrexham, GBR 3. Department of Anesthesiology, University of Brescia, Brescia, ITA

Corresponding author: Andrea Tinnirello, andrea.tinnirello@asst-franciacorta.it

Categories: Anesthesiology, Pain Management, Orthopedics
Keywords: cooled radiofrequency, denervation, shoulder pain

How to cite this abstract
Tinnirello A, Haag T, Santi C (August 05, 2021) Cooled Radiofrequency Denervation of the Axillary, Suprascapular and Lateral Pectoral Nerves in Chronic Shoulder Pain: Preliminary results of a retrospective study. Cureus 13(8): a585

Abstract

Background and aims

Shoulder pain affects about 20% of the general population. The radiofrequency denervation of the suprascapular (SN) nerve to reduce chronic shoulder pain reported a significant decrease in pain scores in 50-85% of patients, but with short follow ups; the Eckmann and Tran's cadaveric studies suggested the axillary (AN) and lateral pectoral (LPN) nerves as completing possible targets. We report a case series where cooled radiofrequency has been applied on the sensitive branches of the three nerves in chronic shoulder pain patients.

Methods

Cooled radiofrequency at 60°C for 150 seconds on AN, SN, and LPN was performed in 14 patients, treated from January 1st 2019, until January 1st 2021. A 17G, 2 mm active tip Cooled RF probe was used, under fluoroscopic guidance, after topical skin anesthesia. Each patient gave informed consent to use their data for research purposes. The local ethical committee is processing the study protocol.

Results

Follow-up at 1 and 6 months has been completed for all patients. 92,8% of patients (13 out of 14) had a successful outcome (pain relief of >50% from baseline) at both 1 and 6 months, both at rest and after movement. Disability, measured with OSS (baseline median 14∓6), improved at all follow-ups with a median of 40∓11 and 40∓10 at 1 and 6 months respectively. No adverse events were reported.

Conclusions

The inclusion of LPN and AN, in addition to the SN, could improve results achieving a more complete and sustained denervation of the joint. Cooled RF denervation of articular branches of the LPN, AN and SN was successful both in terms of pain reduction and disability improvement, with no complication.

Open Access
Abstract
Published 08/05/2021

Copyright
© Copyright 2021
Tinnirello et al. This is an open access abstract distributed under the terms of the Creative Commons Attribution License CC-BY 4.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Distributed under
Creative Commons CC-BY 4.0