CASE REPORT PAIN RELIEF BY BRACHIAL RADIOFRECUENCY. DIFFICULT HUMERUS FRACTURE 94 YEARS OLD WOMAN

TU690

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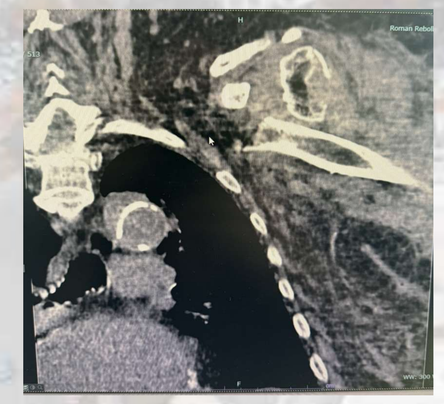
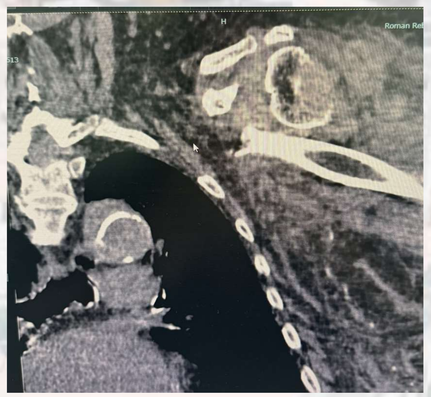
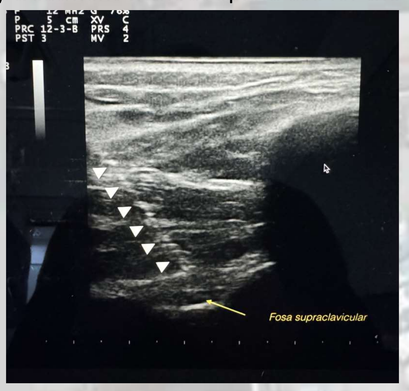
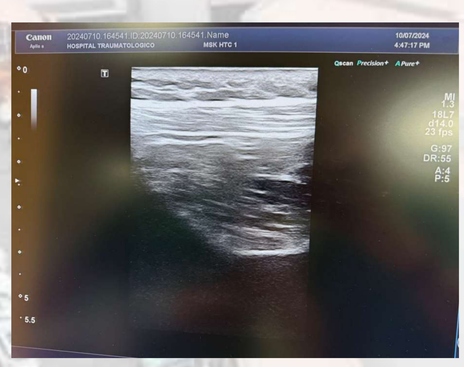
Bipolar radiofrequency of the suprascapular nerve has demonstrated efficacy in adults with chronic shoulder pain. We present a case of successful use of bipolar radiofrequency to treat refractory acute shoulder pain in an elderly patient. Case report: We introduce a 96-year-old woman with a history of humeral fracture and comorbidities including atrial fibrillation, dementia, heart failure, and morbid obesity. Due to her comorbidities and age, surgical intervention was decided against. She experienced pain refractory to analgesics, including opioids and nonsteroidal anti-inflammatory drugs. A multidisciplinary team, in agreement with the family and patient, opted for interventional pain management, accepting potential mobility complications. Pulsed radiofrequency of the suprascapular and infraclavicular nerves was performed, resulting in significant pain relief, rated 3 on the visual analog scale. These outcomes persisted at the one-month follow-up visits, with pain reported as mild and manageable with nonsteroidal anti-inflammatory drugs. The patient passed away after one month due to complications from chronic illnesses.





A 96-year-old patient with a medical history of obesity, atrial fibrillation on anticoagulant therapy, heart failure, morbid obesity, primary hypertension, and type 2 diabetes mellitus suffered a fall at home resulting in a proximal left humerus fracture. The patient was admitted to a trauma hospital for management of chronic conditions and potential surgical intervention. Due to multiple pathologies and advanced age, surgical intervention was decided against, and interventional pain management was chosen instead. Family and patient interviews were conducted to discuss interventional pain management options. It was decided collectively to perform pulsed radiofrequency of the suprascapular nerve and bipolar radiofrequency of the infraclavicular plexus. The procedure was performed under standard ASA monitoring, at a 45º angle, using aseptic technique and ultrasound guidance. First, bipolar radiofrequency was performed with an 80 mm needle for 90 seconds. Then, radiofrequency of the infraclavicular plexus was conducted using two 80 mm needles with a 10 mm active tip, positioned between the medial and lateral cords, and then between the lateral and posterior cords, for 80º for 90 minutes. Subsequently, the suprascapular nerve was identified and pulsed radiofrequency was applied for 8 minutes. The patient experienced no complications during the procedure. Daily follow-up was conducted. The goal of reducing the pain score (EVA) by half was achieved, and the patient only required nonsteroidal anti-inflammatory treatment without opioid use for the first 7 days. The patient passed away one month after the procedure due to complications of underlying illness."





Pulsed radiofrequency (PRF) has been gaining popularity in the treatment of chronic shoulder pain, especially when guided by ultrasound. In recent years, several studies have been conducted to evaluate its effectiveness, applying various combinations and durations of frequencies and currents to determine the optimal approach through these experiments[1], which holds promise for the future.

Ergönenç and Gökhan applied ultrasound-guided PRF and demonstrated that the treatment's effect showed positive results even six months after its application[2]. However, there are not many studies that follow up with patients after treatment, thus more studies are truly needed that include a longer follow-up period[3].

Another procedure involves combining PRF of the suprascapular nerve with treatment of other nerves involved in shoulder joint, such as the axillary nerve. One study combining the blockage of both nerves is that of Yang et al., who observed significant improvements in pain, shoulder flexion, and extension with both blocks, with only shoulder abduction and external rotation showing better results with suprascapular nerve block compared to axillary nerve block[4].

1.Ergönenç T, Beyaz SG. Effects of ultrasound-guided suprascapular nerve pulsed radiofrequency on chronic shoulder pain. Med Ultrason. 2018;20(4):461-6. DOI: 10.11152/mu-1543

2. Shanahan EM, Ahern M, Smith M, Wetherall M, Bresnihan B, Fitzgerald O. Suprascapular nerve block (using bupivacaine and methylprednisolone acetate) in chronic shoulder pain. Ann Rheum Dis. 2003;62(5):400-6. DOI: 10.1136/ard.62.5.400.

3.Yang C, Xu H, Wang R, Liu Y, Wang S. The management of hemiplegic shoulder pain in stroke subjects undergoing pulsed radiofrequency treatment of the suprascapular and axillary nerves: a pilot study. Annals of Palliative Medicine. 2020;9(5):3357-65. DOI: 10.21037/apm-20-1618.

4. Wang YG, Fu YD, Zhou NJ, Yang JK. Efficacy of suprascapular nerve blocks for management of hemiplegic shoulder pain: a systematic review and meta-analysis. Eur Rev Med Pharmacol Sci. 2021;25(14):4702-13.