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Management of resistant de Quervain tenosynovitis with local anesthetic (neural therapy): A case report

Dirençli de Quervain tenosinovitinin lokal anestezik ile tedavisi (nöralterapi): Olgu sunumu

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Abstract

De Quervain tenosynovitis is the most common reason of lateral wrist pain. Treatment consists of splinting, non-steroid anti-inflammatory drugs, and corticosteroid injections. Neural therapy (NT) is a treatment modality using injections with local anesthetics for diagnosis and treatment. Musculoskeletal disorders can be cured by NT. We herein present the management of resistant de Quervain tenosynovitis by neural therapy in a 45-year-old male patient, who was referred to our outpatient clinic with the complaint of right wrist pain lasting over 2 years. His pain was 7/10 based on visual analog scale which had gradually increased. The patient also stated that he could not lift bags and had experienced neck pain 2 years ago. He was engaged in the neural therapy program with the diagnosis of cervical discopathy and tenosynovitis. After 3 sessions he had improvement in functional outcome and pain. In the treatment of resistant de Quervain tenosynovitis accompanying cervical discopathy, neural therapy is an effective and safe method.

Keywords: De Quervain tenosynovitis, Local anesthtetic, Neuraltherapy

Öz

De Quervain tenosinoviti lateral el bilek ağrısının en sık nedenidir. Tenosinovitin tedavisinde splintleme, non-steroid anti inflamatuar ilaçlar ve kortikosteroid enjeksiyonları kullanılır. Nöralterapi (NT), lokal anestezikler kullanılarak yapılan bir tanı ve tedavi yöntemidir. Kas iskelet sistemi bozuklukları NT yaklaşımıyla tedavi edilebilir. Bu vaka sunumunda dirençli de Quervain tenosinovitinin nöralterapi yaklaşımıyla yönetimi sunulmuştur.45 yaşında masabaşı işe sahip erkek hasta polikliniğimize 2 yıldan uzun süredir devam eden sağ el bilek ağrısı şikayetiyle başvurdu. Vizüel analog skalaya göre hastanın ağrısı 7/10 idi ve günden güne ağrısının arttığını ve çanta taşımada sorun yaşadığından şikayetçi idi. Hikayesinde 2 yıl önce boyun ağrısı mevcuttu. Nöralterapi programına servikal diskopati ve tenosinovit tanılarıyla alındı. 3 seans sonra hastanın fonksiyonel son durumu ve ağrısında iyileşme saptandı. Servikal diskopati ile beraber dirençli de Quervain tenosinovitinin tedavisinde nöral terapi efektif ve güvenli bir method olarak uygulanabilir.

Anahtar kelimeler: De Quervain tenosinoviti, Lokal anestezik, Nöralterapi

Introduction

De Quervain tenosynovitis, which was identified by Fritz de Quervain in 1895, occurs by stenosing abductor pollicis longus and extensor pollicis brevis tendons in the first dorsal extensor compartment of the wrist. Being the most common reason of lateral wrist pain, it is more frequently seen in the middle-aged women's dominant hand. Symptoms exacerbate with repeated ulnar deviation and thumb extension [1].

While its etiology is unclear, mixoid degeneration, fibrose tissue deposits and increased vascularity seems responsible in the acute inflammation of the synovial sheath. Tendon sheath thickening due to fibrose deposits in dorsal extensor compartment is blamed for stenosis [2]. It is diagnosed by physical examination: Pain in the wrist is present in Finkelstein test, which involves ulnar deviation. Plain radiography may be helpful in the absence of clinical findings [1,2]. Treatment of the tenosynovitis consists of splinting, non-steroid anti-inflammatory drugs and corticosteroid injections. Clinical symptoms may regress without any intervention. Surgery is required when the patient does not respond to medical treatment and injections [2].

Neural therapy (NT) is a treatment modality involving injections of local anesthetics for diagnosis and therapy. Its indications include functional disorders, inflammatory diseases, and acute or chronic pain [3-5]. NT can be divided into local (ex. Infiltration of trigger points) and segmental therapy (ex. sympathetic ganglia, nerve roots, and peripheral nerves) [6-8].

We herein present the management of resistant de Quervain tenosynovitis by neural therapy.

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Case presentation

A 45-year-old male patient with a desk job was referred to our outpatient clinic with the complaint of right wrist pain lasting over 2 years. He stated that his pain had increased, and he was unable to lift bags recently. Prolonged computer use on his desk lead to pain in his right wrist, which was 7/10 on visual analog scale (VAS). 2 years ago, he underwent cervical magnetic resonance imaging due to neck pain, which revealed C5-6 and C6-7 protrusions without root compression. Medical treatment reduced his neck pain.

He had no history of any chronic diseases or surgery. He did not have obesity or intestinal problems, but he led a sedentary life. In addition, he underwent treatment in his tooth number 46.

In physical examination, Finkelstein test was positive on his right wrist. Bilaterally C2 and right C3 transverse process sensitivity was present on palpation. Increased skin turgor and hyperalgesia were detected on the right C6-7 segments. Motor and sensory examination were normal. Right rotation of lower cervical vertebrae was limited, and while there was no limitation in neck flexion, it was painful. Investigation of trigger points on flexor and extensor muscles of forearm was negative. Although he had received physical therapy, medical treatment, corticosteroid injection and used splints before, there had been no significant decrease in pain or improvement in function.

He was engaged in the neural therapy program with the diagnosis of cervical discopathy, tenosynovitis and interference field (teeth). First session included tendon sheath and segmental intradermal injections (C5-6-7-8) along with T1-8 intradermal injections to regulate the sympathetic nervous system that innervates the upper extremity. His symptoms substantially decreased following the first session, but he had discomfort in using his hand in daily activities. Lower cervical vertebral limitation persisted. Injection of interference field (teeth), facet joints of C5-6-7-8 vertebras and tendon sheath was performed in the second session of the therapy. After the third session, his symptoms and sensitivity with palpation of the transverse processes showed significant improvement. Informed consent was obtained from the patient.

Discussion

De Quervain tenosynovitis is a stenosing tenosynovitis which occurs with repeated ulnar deviation and thumb extension. Diagnosis can be made with physical examination. Splinting, non-steroid anti-inflammatory drugs, physical therapy modalities and corticosteroid injections can be used for treatment [1]. Recently, it has been shown that de Quervain tenosynovitis involves tissue inflammation [9]. Local anesthetics have anti-inflammatory effects around the tendons in the fibro-osseous canal. This anti-inflammatory effect may arise from the injection of local anesthetics. Additionally, segmental intradermal therapy involving the C5-6-7-8 facet joints may help decrease sympathetic activity and pathological signs in supra-spinal levels. Sympathetic nervous system is known to play a role in chronic musculoskeletal pain due to the memory of its neurons. Local anesthetics also may cancel this memory [5,10].

Interference fields are regions that lead to increased sympathetic system activation, sending pathological signals to distant body areas [7]. The most prominent example of the interference field is non-living teeth. Karakan et al. [11] showed the importance of interference field in cervical pathologies from a holistic perspective. In our case there was just one non-living teeth which may lead to chronic and resistant musculoskeletal pain.

In cases which do not resolve with local injections, contributing cervical discopathy should be kept in mind. The patient described neck pain 2 years ago but since that time he has had only wrist pain, which may be the leading reason of missing the cervical pathology. Tenosynovitis can be assessed individually, however, co-existence of two processes resulted in resistance of symptoms.

Previously, Rankin et al. [12] showed positive effects of corticosteroid/local anesthetic injections on de Quervain tenosynovitis, but there is need for further studies which evaluate the effect of local anesthetic injections.

Conclusion

In the treatment of resistant de Quervain tenosynovitis accompanying cervical discopathy, neural therapy may be an effective and safe method.

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