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SYMPTOMATIC REMISSION OF A PATIENT WITH RHEUMATOID ARTHRITIS TREATED WITH NEURAL THERAPY. CASE REPORT

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RESUMEN

Introducción. La artritis reumatoidea (AR) es una enfermedad crónica incapacitante que afecta a individuos principalmente en etapas productivas de la vida. Hasta el momento no se cuenta con estudios sobre remisión sintomática de AR en pacientes tratados con Medicina Neuralterapéutica (MNT), por esta razón, se reporta el caso de una paciente con AR tratada con este sistema médico, para que pueda ser de ayuda en investigaciones futuras acerca del manejo de esta enfermedad con terapias complementarias descritas en la literatura médica.
Presentación del caso. Mujer de 43 años, quien desde los 38 años empezó a presentar episodios de inflamación, dolor en múltiples articulaciones, rigidez matutina articular, disminución frecuente de la fuerza muscular en manos, labilidad emocional y dificultad para conciliar el sueño, además, tuvo un resultado positivo en la prueba de anticuerpos reumatoideos. Estuvo bajo manejo multidisciplinario, incluyendo MNT, por medio de inyecciones con dosis de procaína al 1%. La paciente presentó remisión de sintomatología a pesar de haber suspendido el tratamiento farmacológico formulado por el área de medicina interna para el manejo de la AR.
Conclusiones. El abordaje con Medicina Neuralterapéutica como terapia complementaria permitió alcanzar un alivio de los síntomas, lo que proporciona una herramienta terapéutica que podría servir de apoyo para la resolución sintomática de los pacientes con AR. Dicha hipótesis podría ampliarse con estudios adicionales.

ABSTRACT

Introduction: Rheumatoid arthritis (RA) is a chronic and disabling disease that affects individuals mainly in productive stages of life. To date, there are no studies on symptomatic remission of RA in patients treated with neural therapy (NT). For this reason, the following case of a patient with RA treated with this medical system is reported, so that it may be the basis for future research on the treatment of this disease with complementary therapies in the medical literature.
Case presentation: 43-year-old female patient who, since the age of 38, had episodes of inflammation, polyarticular pain, morning joint stiffness, frequent decreased muscle strength in hands, emotional lability, difficulty falling asleep, and positive rheumatoid factor. With multidisciplinary treatment, including neural therapy with injections of 1% procaine, the patient's symptoms remitted despite suspending the pharmacological treatment formulated by the internal medicine service for RA.
Conclusions: The approach to the patient with a diagnosis of RA with neural therapy as a complementary therapy allowed achieving a relief of most of her symptoms, thus making it a therapeutic tool that could support the resolution of symptoms in patients with RA. This hypothesis could be expanded with further studies.

INTRODUCTION

Rheumatoid arthritis (RA) is the most common autoimmune disease among adults (1). It progresses slowly and chronically (2), involving multiple systems at any time during its course. It progresses to joint damage and disability if not diagnosed and treated in a timely manner (3). In Colombia, 84% of RA cases occur in women (4). Although the origin of this disease is unknown, several theories have suggested that, in addition to genetic predisposition, environmental factors such as infectious agents may also play a role (3,5-6).

RA is expressed as an autoimmune inflammation produced by the infiltration of T cells and macrophages into the synovial membrane, adjacent cartilage, and bone, causing joint damage (7). As the disease progresses, distinctive symptoms appear, including damage to multiple joints, especially hands, wrists, knees, and feet, which usually follow a symmetrical distribution (6,8). RA diagnosis is achieved mainly based on clinical manifestations, interview, and a thorough physical examination, which can be complemented with serological tests such as rheumatoid factor (RF), C-reactive protein (CRP), and anti-cyclic citrullinated peptide (anti-CCP) antibodies. Imaging studies of the affected joints are also considered of great importance for early diagnosis (8,9).

The treatment of RA patients comprises pharmacological and non-pharmacological interventions with the aim of reducing joint damage and improving quality of life (1). NT is a complementary therapy, a complex medical system based on the principle of nervism, which states that the nervous system is the primary regulator of biological phenomena in the human body (10-12); all pathological processes are considered to be neurodystrophies that occur as a result of irritation of the organism (11,13,14).

Diagnosis in neural therapy is achieved by searching for irritations using the medical history of the patient (15,16) and performing a physical examination based on the segmental theory of Head zones or dermatomes, which represent the area of the skin innervated by the same neural segment (17-19), active exploration of cutaneous hypersensitivity, trophism changes, signs of visceral disease such as reflex alterations of the muscles, pain and tenderness of the vertebral spinous processes (19-21), and mental and emotional changes (11,15,20).

Therapeutic intervention in NT is oriented to generate an adaptive response of the organism to the disease by means of self-eco-organization, a concept taken from Edgar Morin (22,23), which supports the administration of procaine in low concentrations in body sites showing some nervous irritation, as well as at the subcutaneous, epidermal, muscular, nervous plexus, and sympathetic system (11,14,24). Local anesthetics such as procaine have the capacity to stabilize the cell membrane, preventing depolarization or achieving repolarization by binding to sodium channel gates (15); moreover, they actively interfere with nerve impulses,

modifying and modulating cellular response (12,15). Likewise, emotional traumas may be treated through psychotherapeutic tools that have a basis in Pavlovian physiology under the principle of monism (11,15).

The following is a case report of a patient with rheumatoid arthritis treated with neural therapy. The objective of this report is to describe the improvement of her symptoms.

CASE PRESENTATION

A 43-year-old woman, native and resident of the city of Bogotá, Colombia, from a low-income household, mestizo, widowed, mother of 5 children between 11 and 18 years of age, occasional domestic employee, voluntarily attended the neural therapy service of a tertiary care center in the city of Bogotá D.C., Colombia, on October 27, 2016, due to multiple pain complaints. Following the death of her husband, five years earlier, she started to experience episodes of pain and swelling in the joints of her hands and feet, with an intensity of 8/10 on the visual analog pain scale (VAS), which later spread to other joints. She also presented with morning stiffness for more than an hour (sometimes lasting until noon), frequent decrease in muscle strength in her hands, emotional lability, and difficulty falling asleep.

She reported a family history of hypertension on her father's side, who was also dependent on alcoholic drinks. She also reported that her family was dysfunctional and that she had experienced abuse and domestic violence since childhood, as well as unresolved grief and depression since the age of 38 due to the death of her husband, after which she decided not to rebuild her sentimental life. Her medical history showed that she presented with repeated bronchiolitis during childhood, mumps at the age of 7 years and, later, bronchopneumonia at the age of 20 years. At the age of 10 she suffered an injury to the anterior aspect of her left leg as a result of a strike with a stone. At the age of 37, she suffered a trauma to her right heel when she fell from her own height, which caused considerable limitation when walking. It was also found that teeth 36, 46, 47 and 48 were missing and that there was a root remnant of tooth 26. The patient was also exposed to wood smoke during childhood and was an active smoker up to 38 years of age. Her first menstruation occurred when she was 13 years old, with irregular cycles accompanied by dysmenorrhea and headache until she was 40 years old. She had five pregnancies, five deliveries and five live children, and in her third delivery, labor was induced causing a third-degree perineal tear.

At the time of consultation, the patient had head, musculoskeletal, cardiopulmonary, genitourinary, neurological, and mental system involvement, as described in Table 1.

Table 1. Description of affected systems.

System	Description	Frequency of symptom presentation	Visual Analog Pain Scale (VAS)
Head	Frontotemporal headache accompanied by nausea. Eye burning. Otalgia in right ear.	Daily. It is related to the menstrual period, strong odors, and noise.	7/10
Musculoskeletal	Arthralgia and inflammation in left foot, knees, ankles, shoulders, and hands. Generalized myalgia.	Daily. Increased with physical activity.	8/10 on average (sum of all the VAS values of the joints described, divided by the total number).
Cardiopulmonary	Oppressive chest pain at the level of the left breast.	Present during stress episodes.	5/10
Genitourinary	Stress urinary incontinence.	Daily.	
Neurological and mental	Fragmented sleep. Melancholy, sadness, and distress.	Dialy. Present since husband's death in 2014.	

Source: Own elaboration.

On December 16, 2016, the initial physical examination was performed, yielding the following findings: weight and height of 65 kg and 148 cm respectively, muscle mass index (BMI) of 29.67, blood pressure: 110/70 mmHg, heart rate: 80 bpm, respiratory rate: 16 rpm, and temperature: 36°C. The physical assessment, from an NT perspective, showed: generalized painful spots on the scalp, pain on pressure in the bilateral cervical paravertebral region, presence of pain on perpendicular pressure on the spinous process of the T1-T4 vertebrae, pain in the interphalangeal and metatarsophalangeal joints of the second and third toes of the left foot, scar sensitive to touch in the middle third of the left leg, and subjective loss of strength in the hands. The patient was told that mini-doses of 1% procaine would be injected in the irritation points, taking into account the onset of symptoms and her life history. In parallel, she was recommended to continue receiving multidisciplinary care from family medicine and rheumatology, as well as to keep up with physical therapy and a diet rich in fruits and vegetables. It was also suggested to avoid the consumption of animal proteins and to perform daily physical activity.

During the same appointment, NT intervention was initiated, with 1-5 mL of 1% procaine at each of the specific sites identified based on the correlation of life history, chronology of irritations, physical examination, and symptom assessment (Table 2 describes the sites treated). The patient initially assisted to these procedures every week, then every two weeks, and finally every two months;

the duration of each session was from 40 minutes to one hour. She tolerated and adhered to NT without adverse effects until the last intervention. The chronological description of the NT interventions can be found in Table 2.

Table 2. Chronological description of interventions with neural therapy and therapeutic responses.

Chronological progress	Interventions (stimulation with 1% procaine)	Therapeutic response
First semester 16/12/2016 to 14/06/2017 (7 sessions)	Tonsillar pillars, bilateral auriculotemporal nerve, bilateral scalp and occipital nerve, bilateral ulnar nerve, bilateral median nerve, right radial nerve, scars in upper limbs. Deep peroneal nerve, posterior tibial nerve, ankle and lower limb scars. 1 to 5 mL of procaine.	Decrease in pain and joint inflammation in upper and lower limbs, VAS from 8/10 to 5/10. No adverse reactions. Improvement in headache intensity, VAS from 7/10 to 3/10. Improved mood. Self-reported improvement of 75% of normal hand strength. No adverse reactions.
Second semester 12/07/2017 to 24/11/2017 (5 sessions)	Exodontia scars, bilateral mental nerve. Reintervention of tonsillar pillars, emotional anchorage (*) in thorax, solar plexus, and liver segment. Right knee scars. Reintervention of ankle segment, superficial peroneal nerve and bilateral posterior tibial nerve. 1 to 5 mL of procaine.	Decrease in pain in upper and lower limbs, VAS from 5/10 to 2/10. Decreased joint swelling in upper and lower limbs. Emotionally calm. Restorative sleep. Self-referred recovery of 100% of normal hand strength. No adverse reactions.
Third semester 11/01/2018 to 01/06/2018 (4 sessions)	Scalp and bilateral occipital nerve, scars in wrist segment, right ulnar nerve, liver (Head's area). Reintervention of ankle segment, superficial peroneal nerve, and bilateral posterior tibial nerve. 1-5 mL of procaine.	Joint pain and swelling in upper limbs and generalized myalgia, VAS 2/10. Emotional stability. Headache: VAS 3/10 to 2/10. No adverse reactions.
Fourth semester 10/07/2018 until 15/11/2018 (3 sessions)	Reintervention of tonsillar pillars, ear segment. Reintervention of scars in lower limbs, emotional anchorage (*) at thorax and shoulder level. 1 to 5 mL of procaine.	Joint pain and swelling in shoulders, decreased myalgia, VAS 2/10. Emotional stability. Headache, VAS 2/10. No adverse reactions.
Fifth semester 22/01/2019 until 16/04/2019 (2 sessions)	Reintervention of tonsillar pillars, emotional anchorage (*) at the level of the lung (Head and Mackenzie area), bilateral infraorbital nerve. 1 to 5 mL of procaine.	Joint pain and swelling only in wrists, and cervicalgia VAS 2/10. No headache. Emotional stability. Restorative sleep. Absence of other symptoms. No adverse reactions.

(*) Emotional anchoring is defined as subcutaneous, fascial, or muscular injections in places where the patient reported feeling different emotional alterations such as anxiety, sadness, and frustration.

VAS: analog scale for pain.

Source: Own elaboration.

Neural therapy, considering the biopsychosocial history as documented in the patient's clinical history, started infiltrations with 1% procaine in tonsillar pillars, scalp, upper and lower limb scars, and bilateral auriculotemporal, occipital, ulnar, median, radial, deep peroneal and bilateral posterior tibial nerves. Once the interventions were implemented, the patient reported improvement in mood, recovery of muscle strength in hands by 70%, and a decrease in headache from 7/10 to 3/10 in VAS. In the second and third trimester, tonsillar pillars, and upper and lower limbs (both scars and nerves) were re-intervened, treating exodontia scars and performing emotional anchorage in anterior thorax, liver and scalp, achieving a 100% recovery of muscle strength in hands, as well as a decrease in pain and joint inflammation in limbs, going from 5/10 to 2/10 in VAS. In the last year of treatment with NT, the tonsillar pillars, the scars of both lower limbs, segments of both ears, and emotional anchorage in the thorax were reintervened. The patient reported significant remission of initial symptoms: absence of headache, emotional stability, joint pain and swelling only in hands (2/10 in VAS), and restorative sleep.

She was diagnosed with RA in March 2017 and was prescribed with methotrexate 12.5 mg every week, prednisolone 5 mg/day, hydroxychloroquine 250 mg/day, and naproxen 250 mg every 12 hours, indefinitely, by the internal medicine service. Although the rheumatology specialty adjusted the treatment, the patient decided to suspend it 7 months later due to "headaches, colds, nosebleeds, and frequent fatigue", a situation she decided not to discuss with the specialists.

Even though there are no reports of inflammation markers during the analyzed periods of this case, the patient presented positive changes after initiating procaine treatment; there was a decrease in VAS pain, as well as a significant improvement in her well-being and mood. Muscle strength was also regained in the hands and restorative sleep was achieved, both of which were the criteria for improvement considered in this study for symptom remission, as described in the therapeutic response (Table 2).

DISCUSSION

According to the clinical practice guideline for the early detection, diagnosis and follow-up of patients with rheumatoid arthritis, the diagnosis of RA is primarily clinical, based on a history of inflammatory joint pain, and the presence of swollen or painful joints on physical examination. The recommended serum tests for diagnosis are: erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), rheumatoid factor (RF), and anti-cyclic citrullinated peptide (anti-CCP) antibodies (1).

In the clinical case described here, 4 months after the death of her husband, the patient developed pain and inflammation in multiple joints of intensity 8/10 in VAS, along with morning stiffness lasting more than one hour, as well as positive

rheumatoid factor, symptoms required for the diagnosis of RA (1,6). Five groups of drugs are generally used for the treatment of RA: acetylsalicylic acid and other non-steroidal anti-inflammatory drugs (NSAIDs), glucocorticoids (in low doses), disease modifying antirheumatics (DMARDs), biologic therapy, immunosuppressants, and cytotoxic drugs (6,8). In the case reported, it was mentioned that the internal medicine service prescribed treatment with naproxen, prednisolone, hydroxychloroquine and methotrexate, medications that the patient discontinued due to intolerance and because she experienced an improvement in her symptoms when she started the NT interventions.

Three months before starting the pharmacological treatment suggested by internal medicine, the patient attended the neural therapy program voluntarily, and at that time she started treatment with procaine and continued with follow-up for two and a half years. The symptoms reported by the patient in the anamnesis, their relationship in time after her husband's death, and the findings of cutaneous hypersensitivity on physical examination, led the neural therapy diagnosis to an underlying emotional disturbance, which, added to the infectious, traumatic and dental irritations, favored the generalization of the dystrophy and, as a consequence, generated the appearance of symptoms characteristic of RA. It should be kept in mind that the emotional and mental system uses synaptic connections directed by the central nervous system to generate motor, somatic, autonomic, endocrine, immune, and inflammatory responses (15).

More current theories, such as the Inflammatory Reflex Theory proposed by neurosurgeon Kevin Tracey (25), have confirmed the modulatory role of inflammatory response of the nervous system. According to him, the nervous system acts by means of a reflex mechanism regulating inflammation, mainly through the parasympathetic system, a response that, compared to the classic humoral immune response, is characterized by being local, rapid and integrated to the central nervous system (25-29). Recently, Andersson and Tracey (30) suggested the use of transcutaneous vagus nerve impulse stimulation to reduce inflammatory response in RA patients, a result that might be achieved due to the effects already measured on tumor necrosis factor and other proinflammatory cytokines in which there is a significant decrease after vagus nerve stimulation (30).

Neural therapy as a complement in the management of the disease provides tools that allow approaching the patient as a unit, guiding the clinical course of the disease to a more adaptive state. Although there is no recent scientific evidence on the action of neural therapy, specifically in RA (31), benefits have been reported with this treatment in patients with chronic refractory pain of different origin (32), and in musculoskeletal pain, including cases of arthropathy (33).

A study on autoimmune diseases such as Raynaud's Syndrome reported significant clinical improvement following the use of neural therapy in a prospective, non-randomized case series analysis (34). In turn, Oettmeier (35) cites a case

of clinical improvement of a patient with RA using infusions with procaine and sodium bicarbonate, but under a different conception to that of neural therapy, without quantitative measurements and without specifying clinical or paraclinical details of the case. Since it was a historical recount publication, the present article is the first specific case report of rheumatoid arthritis treated with neural therapy that has been published on the therapeutic effect of this medical system.

CONCLUSIONS

The use of NT as an adjunct therapy for the treatment of the RA patient favored the modulation of pain and joint edema, improving related symptoms and her quality of life. Further controlled clinical trial studies should be developed, and research related to the use of NT for other types of conditions and pain syndromes should be pursued.

ETHICAL CONSIDERATIONS

The patient gave written consent for the publication of this case.

CONFLICT OF INTEREST

None stated by the authors.

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