**Título:** Complex Regional Pain Syndrome - The Role of Capsaicin?

**Autores:** Ana Raquel Cruz, Joana Veiga Torres

**Instituições:** ULSM - Hospital Pedro Hispano

**Área Terapêutica/Tema:** Manejo da Dor aguda e Crónica (Acute and Chronic Pain Management)

**Resumo:**

Background:

Complex regional pain syndrome (CRPS) is a debilitating and painful condition occurring most often after trauma and surgery, associated with sensory, motor, autonomic, skin and bone abnormalities. CRPS type II occurs when there is associated nerve damage. (1)

Although the majority of patients with CRPS will be considerably better within the first year, some patients will have persistent symptoms.  Generally the management of CRPS can be a truly challenge.

We report the case of patient with CPRS type II under treatment with topical capsaicin, with a great functional improvement.

Case Report:

A 41 year-old female, victim of a domestic accident in 2018 which resulted in trauma of right wrist requiring flexor tenorrhaphy and median nerve neurorrhaphy, developed a complex regional pain syndrome type II.

She referred severe pain on median nerve territory of her dominant hand, associated with hyperalgesia, allodynia and burning and electric shock sensation, resulting in functional disability. Concomitantly with flushing and edema of the right hand.

Electromyography of the upper limbs was performed, demonstrating "absence of sensory potentials on the fingers of the right hand to the stimulation of the right median nerve of the wrist, compatible with severe axonal injury ".

She was referred to Pain Medicine Unit and started treatment with gabapentin, amitriptyline and tramadol, being proposed for treatment with capsaicin 8% patch. After 3 months of first patch application, there was a considerable reduction of allodynia area and also reduction of edema and flushing of the right hand. A second application patch was performed and six months later in the reevaluation consultation she reported no allodynia, reporting hyperalgesia referred only to the first finger. There was also reduction of edema and flush of the hand and a considerable functional improvement, previously conditioned by allodynia and hyperalgesia, allowing her to resume labor activity.

Discussion:

Capsaicin acts on the transient receptor potential cation channel vanilloid 1 (TRPV1) which is involved in the modulation of nociceptive inputs to spinal cord and brain stem centers, as well as the integration of diverse painful stimuli. High concentration of capsaicin lead to long term defunctionalization mediated by the ablation of TRPV1 expressing afferent terminals, resulting in long-lasting analgesia.(2)

Although capsaicin is a well-accepted and documented treatment in some neuropathic pain such as postherpetic neuralgia, it has rarely been described in complex regional pain syndrome.

We report the successful use of capsaicin in a case of complex regional pain syndrome, whose application resulted in a considerable functional improvement.

References:

(1) Anesthesiology September 2010, Vol. 113, 713–725.

(2) European Journal of Pain Supplements 4 (2010) 170–174

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