The Best of the Best

Top-Accessed Article: Combination Gel of 1% Amitriptyline and 0.5% Ketamine to Treat Refractory Erythromelalgia Pain

Sandroni P, Davis MP. Combination gel of 1% amitriptyline and 0.5% ketamine to treat refractory erythromelalgia pain: a new treatment option? Arch Dermatol. 2006;142(3):283-286.

Erythromelalgia is a rare skin disorder characterized by severe burning pain, warmth, and erythema that is aggravated by heat and exercise. It is considered to be a neurovascular disorder associated with a small nerve fiber neuropathy and altered voltage-gated sodium channels. In recent years, neuromodulating agents, such as gabapentin and pregabalin, as well as topical lidocaine, were found to be useful therapies. However, there are cases of erythromelalgia that remain resistant to these conventional therapies and cause extreme suffering. Sandroni and Davis report using a novel treatment featuring combination gel of 1% amitryptiline hydrochloride and 0.5% ketamine hydrochloride in lecithin pluronic organogel applied 4 to 5 times a day in 5 patients with intractable erythromelalgia. In 4 of these patients, a significant response was noted, with the improvement rate ranging from 50% to 95%.

The rationale for this combination can be explained by specific pathways that are targeted. Ketamine is an N-methyl-D aspartate (NMDA) receptor antagonist and a modulator of glutamatergic receptors. This is important since NMDA and glutamate are known to play a key role in neuropathic pain. Amitriptyline is a tricyclic antidepressant, which helps reduces pain in various disorders owing to its ability to block voltage-gated sodium ion channels. While topical application in limited body areas in this study did not lead to systemic absorption, the safety profile of this preparation has not been fully assessed. Nonetheless, this anecdotal report holds promise as a potential treatment for other forms of neuropathic pain and possibly neuropathic itch.

From October 2010 to August 2011, this article was viewed 1504 times on the JAMA Dermatology website.

Author Affiliation: Department of Dermatology, Wake Forest University School of Medicine, Winston Salem, North Carolina.

Contact Dr Yosipovitch at Department of Dermatology, Wake Forest University School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157 (gyosipov@wakehealth.edu).