



Discussion

axons can be altered due to the initiations of complex reaction up forms of arthritis, which is caused by the persistent elevation of uric acid in the bloodstream, leading to significant presence of crystal compression, stretching, or transaction of the periphery nerves, followed by a spontaneous hyper-excitability on the site. During formation in the joints, tendons and surrounding tissues. It commonly occurs in those who are regularly consuming red meat and beer. Along with the inflammation of joints, pain is an accompanying factor in neuropathic pain, nociceptors demonstrate a dynamic expression of ion channels, such as Nav channels [4]. In fact, Nav channels are the major channels in regulation of the neuronal excitability, initiation and propagation of the action potentials. The Na⁺ current in the dorsal root ganglion can be classified into three types, namely, fast tetrodotoxin-sensitive, slow tetrodotoxin-resistant with high-activation thresholds and persistent TTX-R with lower activation thresholds. TTX is a potent neurotoxin and acts as a Nav channel blocker whereby its binding with the Nav channels inhibits the firing of action potentials generated in the neurons. Inflammation is a natural biological response produced by the tissues within our body as a reaction to the harmful stimuli in order to eradicate the necrotic cells and initiate the tissue repairing process. Neutrophils are usually the first respondents of an inflammatory response and gather at the site of injury via the bloodstream, followed by the release of other chemical mediators. Inflammation may lead to three major responses: hyperalgesia, allodynia and sympathetic maintained pain [5]. An inflammation can also induce mast cell degranulation, which subsequently leads to the release of platelet activating factor and stimulates the release of 5-HT from the circulating platelet [6]. The cardinal signs of inflammation include the hot in the site due to increase in blood flow towards the region, redness, and swelling due to vascular permeability pain caused by the activation and sensitization of primary afferent neurons and lasting loss of function.

The localized inflammatory response then induce the release of free arachidonic acid from the phospholipids, which are converted into prostaglandins via the cyclooxygenase pathways. Pain from inflammation can be further classified into two types, chronic and acute pain [7]. Acute inflammatory pain is normally intense and occurs for a short period of time, which is initiated as a response to harmful stimuli that are normally mediated by the A-fibers. Leukocytes and plasma from the bloodstream are accumulated at the site of the injury to assist in the inflammatory process. However, prolonged inflammation, better known as chronic inflammatory pain, lasts beyond the expected period of healing, which is typically mediated by C-fibers. There is a progressive shift of mononuclear cells at the site of the inflammation as well. Inflammatory pain causes the increase of afferent input into the DH of the spinal cord and leads to the development of central sensitization. There are some mediators produced at the site of injured tissue, which include HT, kinins, histamine, nerve growth factors, adenosine triphosphate, PG, glutamate, leukotrienes, nitric oxide, NE and protons [8]. During the process of inflammation, these chemical inflammatory mediators are produced from the necrotic tissues, and interact to activate the nociceptors within the injured area. Arthritis in layman terms can be defined as joint inflammation. The major causes of arthritis include bone erosion, formation of new bones, synovial hyperplasia, ankylosis of the joint and infiltration of inflammatory cells. The cardinal signs involved include redness, swelling, hotness, and large reduction in the range of motion of the affected joints. There are currently more than a hundred types of arthritis that patients suffer from. Among them, osteoarthritis, rheumatoid arthritis and gout are easily described as the most common type of arthritis reported. Osteoarthritis often occurs in patients with advanced age due to the degeneration of joint cartilage or its underlying bone. Its pain is well-localized and occurs during weight-bearing movement, whereas rheumatoid arthritis is an autoimmune disease of the synovium that leads to polyarthritic conditions [9]. It commonly affects our hands or feet. Gout is one of the most painful

Conclusion

In conclusion, Although many have long been believed that opioids are the strongest pain medications and should be used for more severe pain, scientific literature does not support that belief. There are many other treatments that should be utilized for treating pain. Studies have shown NSAIDs are just as strong as the opioids.

Acknowledgement

None

Conflict of Interest

None

References

- Mello RD, Dickenson AH (2008) Spinal cord mechanisms of pain. BJA US 101:8-16.
- ZLHERGD 3)LOLS 5 3U\ \VWX SSES mehUcR pan: types, mechanism and treatment. Ann Agric Environ Med EU 1:2-7.
- Nadler SF, Weingand K, Kruse RJ (2004) The physiologic basis and clinical applications of cryotherapy and thermotherapy for the pain practitioner. Pain Physician US 7:395-399.
- ODURRQ -& %RVW -: %RUGHQ 0. /RUHQJNaOral 5RVV DQWL LQADPPDWRU\ DJHQWV IRU SDLQ UHOLHI LQ 13.
- Birnesser H, Oberbaum M, Klein P, Weiser M (2004) The Homeopathic Preparation Traumeel® S Compared With NSAIDs For Symptomatic Treatment Of Epicondylitis. J Musculoskelet Res EU 8:119-128.
- 2]JROL * *ROL 0 0R&W P\$DUJLVRQ ð0 DI QTP\H'

