IV Lidocaine Infusion: An Approach to Managing Widespread Body Pain Syndrome

Authors: AO Ilyinski[1], WM Khan[2], OI Ilyinski[3]

Author affiliations:
1. UCD School of Medicine. 2. Beacon Pain Clinic, Dublin. 3. Dublin Pain Clinic Group, Assoc. Prof. of UCD

Correspondence to: AO Ilyinski (anton.ilyinski@ucdconnect.ie)

Introduction

Widespread body pain is a life changing symptom of various conditions, however, it is often associated with fibromyalgia. This chronic pain condition is rarely manageable solely by oral medications and requires additional, more specific approaches for effective treatment[1]. Although still unclear, it is likely that the cause of fibromyalgia lies in a change within central pain processing pathways, magnifying peripheral pain signals[1].

Fibromyalgia carries with it a variety of symptoms including widespread muscular pain, tenderness, unrefreshed sleep, fatigue. Irritable bowel and bladder symptoms, disability, reduced quality of life and depression are often observed in conjunction with fibromyalgia[2]. Being a chronic syndrome, defined in terms of pain and tenderness, it is accepted to be a pain disorder.

Epidemiology

Fibromyalgia affects a significant portion of the world's population. According to the National Fibromyalgia and Chronic Pain Association[3], 10 million people suffer from fibromyalgia in the USA. The NHS estimates that between 1.2 and 2.8 million people suffer the same in the UK. As reported by Queiroz in 2013[4], the USA showed an overall prevalence of 6.4% (7.7% and 4.9% in females and males respectively) in a group of 3,410 subjects of 21 years or older in 2010[5]. Germany showed an overall prevalence of 2.1% (2.4% and 1.8% in females and males respectively) in a group of 2,445 subjects of 14 years and older in the same year[6]. At the same time, an overall prevalence of 0.6% was seen in Thailand in a group of 1,000 subjects[7].

Evidently, it is a widespread issue, although presenting different rates of prevalence around the world. Hence, it is important to integrate into current treatments a more effective and safe approach for such a condition, while trying to exclude as many risks associated with such treatment as possible.

Prof Oleg Ilyinski, Consultant in Pain Medicine, Assoc. Professor of UCD, Dublin Pain Clinic Group

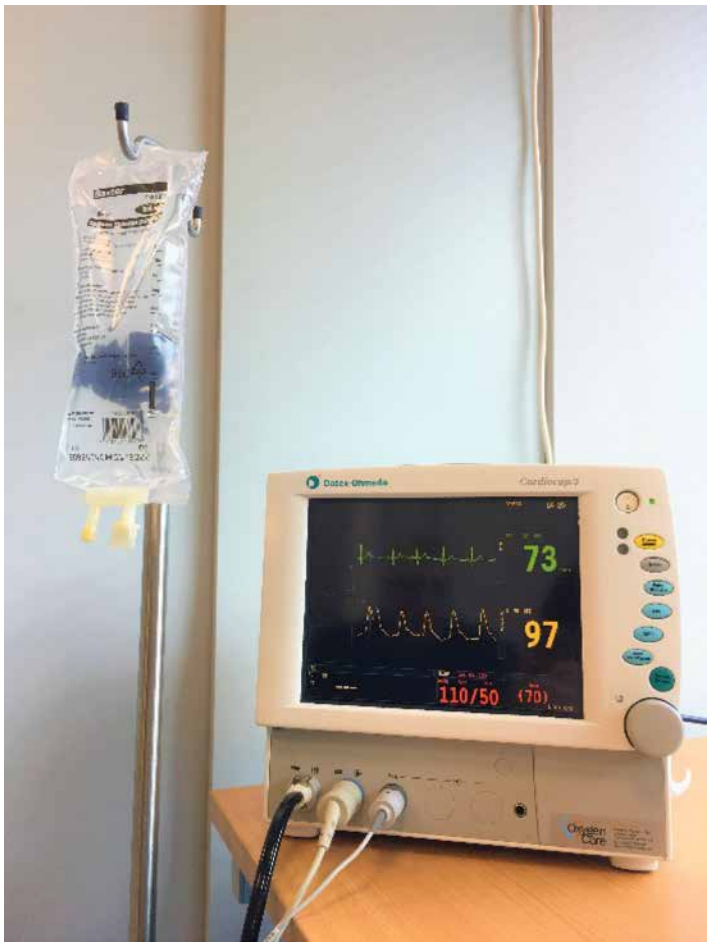
Dr Wajid M Khan, Consultant in Pain Medicine, Beacon Pain Clinic

Anton Ilyinski, Student, UCD School of Medicine

Traditional Treatment

Treatment of fibromyalgia is multidisciplinary, including inputs from rheumatology, pain medicine, physiotherapy and psychology with various pharmacological, psychological, physical and complementary therapies. Non-steroidal anti-inflammatory drugs and steroids have been shown to give little significant relief[8, 9]; tricyclic antidepressants show modest effect for patients with fibromyalgia[10, 11]. It is generally difficult to assess the effect of cognitive behavioural therapies in a controlled setting, however, they can nevertheless be useful in treatment[12]. Electroacupuncture was found to give short-term benefit[13], while there has not been enough study performed on cardiovascular conditioning[14–16]. Hence, an updated method of treatment should be sought after.

When traditional treatment does not show acceptable relief for the patient, we believe Intravenous Lidocaine Infusion should be considered the next step in finding the correct treatment that will bring the patient closer to pain relief. It has proven itself to be safe and effective in those suffering from various chronic pain conditions,



and can be repeated at steady intervals once effects wear off, which can vary from 3 weeks to 12 months.

An Alternative Approach

Intravenous Lidocaine Infusion has shown to be effective in post-operative acute pain, and is thought to inhibit neutrophil activation and therefore reduce interleukin release[17]. It acts as a sodium channel blocker, reducing neural hypersensitivity - an attractive mechanism for treatment of patients suffering from fibromyalgia.

As mentioned before, the mechanism of local anaesthetic infusion therapy is not yet fully understood. It has been shown that fibromyalgia is associated with disorder of sensory pathways both peripherally and centrally. Following studies carried out by Gibson[18] and Lorenz[19], it is evident that peripheral stimulation induces central changes, rationalising the use of systemic infusion therapies, rather than local application.

Throughout our practice of the treatment, we have found that analgesic effect and side effects are dependent on the speed and dosage of administration.

The patient's ECG, heart rate, blood pressure and neurological observation are closely monitored throughout the procedure, as they act as an indication for safe and adequate speed of administration.

According to our data, a reduction in pain intensity of 70% or more is observed in 60-65% of patients, with pain relief lasting 3-12 months after the procedure. 15-20% of patients show satisfactory pain relief for a period between 3 weeks and 3 months. The remaining patients show little to no response.

As with most procedures, IV Lidocaine Infusions carry with them a risk of side-effects. From review of literature, we found that these could potentially include hypertension, hypotension, headache, nausea and heart dysrhythmias[20]. These symptoms were reported to have resolved upon slowing administration or discontinuing the procedure. There is also an exceptionally rare possibility of an allergic reaction. Heart dysrhythmias and hyper-/hypotension can be avoided when the patient is under close monitoring. Throughout our practice, we have seen no incidence of side-effects in patients who underwent an IV Lidocaine Infusion.

From our clinical experience and extensive research of the topic, we are confident that the IV Lidocaine infusion for patients suffering from fibromyalgia is a safe and valuable option. It allows to significantly reduce oral medication and avoid side-effects, as well as to improve quality of life of patients with fibromyalgia and other conditions involving widespread pain such as peripheral neuropathy.

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