

# Renal colic pain and the TENS as an alternative analgesia

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Kidney stones are prevalent in the “stone belt” region which extends over America (Southeast), Africa (North), Middle East (Southeast) and Australia (Northeast) [1]. Globally, the lifetime prevalence of stone disease is 10 to 15% and it counts for millions of patient visits to the emergency department (ED), or the outpatient clinics [1,2]. The incidence of renal stones is globally increasing with an estimated prevalence ranging up to 15%. During lifetime, approximately 7% of women and 13% of men will develop a renal stone. The main aim of management in the Emergency Department is to provide fast, effective and safe analgesia to patients. Most studies published in relation to the acute management of pain in renal colic focuses on the use of prescribed analgesia as described above with little emphasis on the use of other modalities of pain control such as TENS.

The pain associated with renal colic is usually very excruciating with the most commonly prescribed analgesia in renal colic are non-steroidal anti-inflammatory drugs (NSAIDs), opioids and paracetamol [3,4]. Both these drugs have significant side effects with prolonged use. In regard to opioid analgesia prolonged use can lead to opioid addiction as well as in the elderly population can lead to gait instability which can cause significant injuries. The prolonged use of NSAIDs can lead to acute kidney injury as well as upper gastrointestinal bleeds and in regard to paracetamol prolonged use can lead to hepatotoxicity.

TENS has been used to complement traditional analgesia in both labour, postoperative pain as well as musculoskeletal pain [5,6]. There has been limited study in the past which has showed that TENS was an effective means of pain control in patients with suspected renal colic delivered by emergency care workers [7]. However, in this study TENS was applied to a variety of patients with symptoms suggestive of renal colic but without confirmation of renal stones in the back of an ambulance. In a world with a growing dependence on prescribed analgesia, TENS offers an alternative as a fast, alternative and effective way of delivering analgesia without the side effects of prescribed analgesia.

TENS is only applied locally over the affected kidney area resulting in minimal systemic side effects that are commonly seen in prescribed pharmaceutical agents. Furthermore, in view of its portability as well as its relative ease of use, TENS can be used in the outpatient setting as well as in the Emergency Department and/or inpatient setting. TENS is already currently being used in an outpatient setting as analgesic option for musculoskeletal pain as well as post-operative pain. Research into other modalities of pain control will help provide a better understanding of the analgesic options available to patients suffering renal colic rather than the sole reliance on pharmaceutical therapy. This hopefully would lead to a decrease in the prescription of pharmaceutical analgesia and the associated side effects associated with it.

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