

# The Use of Palliative Acupuncture as a Pain Management Strategy in a Patient with Mucopolysaccharidosis Type II

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## Introduction

Acupuncture is a complementary therapy being used increasingly in a multi-modal approach to pain management. Despite minimal contraindications and an excellent safety profile, skepticism still exists around efficacy of acupuncture. We present a novel case in which the use of palliative acupuncture was used successfully to manage chronic pain in a medically complex patient.

## Case Presentation

- 23 yo w/ mucopolysaccharidosis type II, skeletal dysplasia, hypotonia, and severe cervical spinal stenosis with myelomalacia
- Pain clinic for management options for his chronic radicular neck pain, atypical chest wall pain, bilateral osteoarthritic knee pain, and pain related to contractures of his bilateral upper extremities
- HCM, severe AI, OSA on BiPAP, Chronic Lung Disease
- Reported difficult bag mask ventilation and difficult intubation
- Initial pharmacotherapy treatment failed secondary to adverse effects and intolerance to medications from several different drug classes
- Significant sedation and varying degrees of respiratory depression which was a major concern in this patient given his poor pulmonary capacity and difficult airway
- Referred for acupuncture to optimize non-pharmacologic approaches
- After the first session, the patient reported improvement in his chronic pain by >50%
- Optimal results with weekly treatment sessions which he has now been receiving for >1 year
- Improving pain scores, participation with physical therapy and stretching, ability to perform ADL/IADL

## Acupuncture Techniques

Basic Needling  
Electro Acupuncture (EA)  
Moxibustion  
Laser Acupuncture  
Acupressure

## Theories of Mechanism

Natural Opioid Substances  
The Neurogate Theory  
Endogenous Corticosteroid Release  
Myofibrillary Entanglement  
Local Blood Flow  
Mesolimbic Loop of Analgesia

## Discussion

Acupuncture has been well described and practiced for centuries as a modality for treatment of acute and chronic pain. Although well described, it remains underutilized due to lack of well-designed studies to confirm its utility as a treatment option for many pain diagnoses encountered in the pain clinic. Acupuncture has been postulated to improve pain control through varying mechanisms including increasing concentrations of natural opioid substances, stimulating endogenous corticosteroid release, and increasing local blood flow to initiate or catalyze the healing process. Most commonly, acupuncture as a pain management strategy is considered when all other options have been exhausted or response to other treatments have been suboptimal. We propose strong consideration for incorporating acupuncture into a patient's pain treatment plan earlier in the course of therapy in order to maximize benefits. This is especially true for patients in which conventional standard of care incurs great risk for the patient, is not acceptable to the patient, or has intolerable side effects.



Points used for knee pain: LR-3, SP-6, SP-9, ST-34 & ST-36

## References

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- 3) Bastien JL. (2006). *Can J Anaesth.* 53:159-61.
- 4) Hsieh VC. (2015). *Pediatr Anesth.* 25:438-39.