

Antihistamines as sole analgesic therapy for chronic refractory pain: a case report

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INTRODUCTION

- **Chronic pain** has been reported as one of the most burdensome sequelae in patients suffering from **spinal cord injuries**.
- Its origin can be attributed to **nociceptive**, **neuropathic**, and **neuroplastic** insults.
- **Antihistamines** (H1-antagonists) as analgesic alternatives are still controversial.
- **Diphenhydramine** is an H1-histamine receptor antagonist and has been used as an analgesic for dysmenorrhea, trigeminal neuralgia, and thalamic pain syndrome¹.
- The use of diphenhydramine as a **sole analgesic** for **sacral decubitus ulcer pain** in spinal cord injury patients has not been previously described.

MATERIALS AND METHODS

- As this case report is **devoid of patient identifiable information**, it is exempt from IRB review requirements as per Cook County Health policy.
- Patient **informed consent was obtained** for submission of this case report.

CASE PRESENTATION

- 41 y/o female with **traumatic T12 spinal cord injury** during childhood leading to paraplegia and chronic sacral decubitus ulcers complicated with recurrent infections.
- Home analgesic regimen predominantly composed of **oral diphenhydramine**.



- History of numerous inpatient admissions requiring **multidisciplinary** management.
- Physical exam: large deep wound with granulation tissue localized to sacrum with extension to bilateral hips.



- Multimodal analgesic regimen including gabapentin, acetaminophen, and tramadol **without significant improvement**.
- Intravenous (IV) diphenhydramine was initiated at **25 mg IV every 6 hours**.
- Significant relief with no major side effects.

DISCUSSION

- The role of **histamine** in pain processes has been documented in the literature².
- Interaction with **opioid** receptor sites, action at presynaptic **histamine autoreceptors**², **anti-serotonergic/anti-adrenergic** effects³, and even **NMDA** receptor antagonism⁴ are some of the possible mechanisms proposed to account for the analgesic properties of antihistamines.
- **Diphenhydramine** may represent a viable and effective analgesic option for patients with refractory chronic pain following **spinal cord injuries**.
- Although its mechanism of action is still unclear, diphenhydramine may be useful in either nociceptive, neuropathic, or neuroplastic pain which has failed to respond to opioids and conventional adjuvants.

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