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CHARACTERIZING TYPES OF PAIN AND MANAGEMENT IN THE EMERGENCY DEPARTMENT SETTING

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Introduction

While there exist some studies evaluating the effectiveness of regional blocks in certain emergency department (ED) populations, minimal research exists describing the overall landscape of painful conditions experienced by ED patients or describing which ED patients would be amendable to regional anesthesia. In this study, we aim to describe the types of painful conditions reported in ED patients and describe the therapeutic options currently used to treat these patients.

Materials and Methods

We conducted a retrospective chart review of 323 randomly sampled ED patients within a large academic medical center in upstate New York from 2022. Charts were analyzed for demographics, types of pain (nociceptive, neuropathic, and unspecified), and treatment prescribed. The type of pain and analgesia prescribed were tabulated. This study was approved by the Albany Medical College Institutional Review Board.

Results/Case Report

The study population consisted of 150 (46.44%) women and 173 (53.56%) men; 208 (64.40%) who identified as White, 57 (17.65%) as Black or African American, and 15 (4.64%) as Asian, or other. The mean age was 38.67 years (± 27.22 years). Of the 323 patients in the study population, 172 (53.25%) patients had pain as their primary or secondary complaint.

Of the 172 patients with painful conditions, 26 (15.12%) had neuropathic pain (shooting, burning, numbness, tingling, muscle weakness, radiating), 83 (48.25%) had nociceptive pain (sharp, aching, throbbing), and 61 (35.47%) had unspecified pain.

Of the 83 patients with nociceptive pain, 37 (21.51% of total patients with pain) were classified as visceral, 11 (6.40% of total patients with pain) fracture-related cases, 7 (4.07% of total patients with pain) lower extremity pain, and 3 (1.74% of total patients with pain) back pain. Thirty-four (19.77% of total patients with pain) cases of nociceptive pain were classified as non-visceral (traumatic or musculoskeletal) and 10 (5.81% of total patients with pain) classified as other, of which 6 (3.49% of total patients with pain) were headaches. The remaining 3 (1.74% of total patients with

pain) cases of nociceptive pain were of unspecified origin.

Of the 172 patients with pain, 58 (33.72% of the total patients with pain) received opioids for analgesia, with 48 (27.91% of the total patients with pain) received opioids parenterally. The treatment for each type of pain is tabulated in the table. Two (1.16% of total patients with pain) patients, complaining of neuropathic pain and received Gabapentin in the ED, while 2 (1.16% of total patients with pain) patients (one presenting with nociceptive pain and the other for radicular neuropathic pain) were prescribed Gabapentin for discharge.

Discussion

In this sample of ED patients, more than half of patients presented with painful conditions, where over 30% of these patients received opioids for analgesia. The infrequent use of regional nerve blocks and lidocaine patches, especially in patients with musculoskeletal pain, highlights an opportunity for multimodal analgesia, including regional nerve blocks. Further study may be warranted to determine in more detail which specific ED patients might benefit from regional anesthesia and/or multimodal pain strategies.

References

n/a

Disclosures

No

Tables / Images

Table 1. Types of pain and treatment for ED patients with painful conditions

	Analgesia Received in the ED						
Pain Types	Acetaminophen	Benzodiazepines	Lidocaine	NSAIDs	Opioids	Regional Nerve Block	Muscle Relaxants
Neuropathic	3 (11.54%)	2 (7.69%)	2 (7.69%)	6 (23.08%)	13 (50.00%)	0	0
Nociceptive	31 (36.0%)	4 (4.7%)	4 (4.7%)	17 (19.8%)	30 (34.9%)	1 (1.20%)	1 (1.20%)
Unspecified	27 (44.26%)	9 (14.75%)	6 (9.84%)	17 (27.87%)	15 (24.59%)	0	1 (1.64%)
Total	**61 (31.94%)**	**15 (7.85%)**	**12 (6.28%)**	**40 (20.94%)**	**58 (30.37%)**	**1 (0.52%)**	**2 (1.05%)**

*Total n greater than study population due to some patients receiving more than one type of analgesia
**APAP = Acetaminophen
***NSAIDS = Non-Steroidal Anti-Inflammatory Drugs