ONLINE FIRST

Palliative Medicine in Practice

ISSN: 2545-0425

e-ISSN: 2545-1359

Anterior cutaneous nerve entrapment syndrome (ACNES) in a Palliative care setting

Author: Devina Juneja

DOI: 10.5603/pmp.100918

Article type: Letter to the Editor

Submitted: 2024-05-29

Accepted: 2024-06-13

Published online: 2024-06-14

[LETTER TO THE EDITOR]

DOI: 10.5603/pmp.100918

Anterior cutaneous nerve entrapment syndrome (ACNES) in a Palliative care setting

[Short title: Dealing with chronic pain]

Devina Juneja https://orcid.org/0009-0000-4598-1592

All India Institute of Medical Sciences, New Delhi, India

Address for correspondence:

Devina Juneja, All India Institute of Medical Sciences, Ansari Nagar, 110608 New Delhi, India, e-mail: juneja.devina1995@gmail.com

Received: 29.05.2024 Accepted: 13.06.2024 Early publication date: 14.06.2024

Keywords: pain; palliative, nerve block, abdominal pain

Introduction

Chronic abdominal wall pain often poses diagnostic challenges, frequently leading to extensive and unnecessary investigations [1]. anterior cutaneous nerve entrapment syndrome (ACNES), a prevalent cause of chronic abdominal wall pain, warrants special attention in palliative care settings due to its significant impact on patients' comfort and quality of life [2].

Case presentation

Recently, a 31-year-old male patient was diagnosed with ACNES in 2020. He presented with severe, localized abdominal pain persisting for several months, associated with a positive Carnett's sign (pain aggravated by movement and with abdominal muscles’

tension). Despite an initial Numeric Rating Scale (NRS) pain score of 7, his reliance on as-needed (SOS) analgesics provided inconsistent relief, highlighting the inadequacy of current pain management strategies.

Upon a comprehensive evaluation, initiated was a structured pain management plan. Recognizing the importance of addressing all the aspects of pain management, a multifaceted approach was employed. This included administration of a transverse abdominis plane (TAP) block for targeted pain relief. Additionally, the oral analgesics regimen was optimized with NSAIDs and Gabapentin for their neuropathic pain management properties. Patient education emphasizing the consistent use of analgesics to prevent breakthrough pain, alongside detailed information about ACNES and its treatment, was integral to the intervention. Through this intervention, the patient's pain significantly decreased from an NRS score of 7 to 2, demonstrating the efficacy of this approach. This outcome underscores the pivotal role of targeted pain management strategies and effective communication in palliative care.

Discussion

The present case highlights several important considerations. Characteristic features of ACNES, such as sharp, localized abdominal pain aggravated by movement and with abdominal muscles' tension (positive Carnett's sign) necessitate a structured diagnostic approach. Various interventions, including local anesthetic injections, TAP block, and oral analgesics, offer effective pain relief for ACNES (Table 1). Despite planned invasive interventions like the TAP block, maintaining consistent analgesic levels is essential for preventing breakthrough pain and ensuring patient comfort. The timing of interventions, including the TAP block, may vary depending on the patient's pain severity and response to initial treatment. The differential diagnoses (Table 2) aid in distinguishing ACNES from other causes of abdominal pain in palliative care settings. While limited literature exists on ACNES within palliative care populations, further research in this area is warranted to enhance understanding and improve management strategies.

This case serves as a reminder of the critical need for healthcare providers to consider conditions like ACNES in the differential diagnosis of chronic abdominal pain [3]. It also emphasizes the importance of educating patients about their conditions and the proper use of medications. By doing so, one can prevent the pitfalls of misdiagnosis and inadequate pain management, thereby enhancing patient outcomes and quality of life.

Managing ACNES in palliative care requires a holistic approach, integrating targeted interventions with patient education. By addressing the unique challenges of chronic abdominal wall pain, one can optimize outcomes and enhance the quality of life for patients in palliative care settings [4].

Article information and declaration

Acknowledgments

The author duly acknowledges the Department of Oncoanaesthesia and Palliative Medicine faculty, All India Institute of Medical Sciences, New Delhi.

Conflict of interest

The author declares no conflict of interest.

Funding

None.

Supplementary material

None.

References

1. Applegate WV. Abdominal cutaneous nerve entrapment syndrome (ACNES): a commonly overlooked cause of abdominal pain. Perm J. 2002; 6(3): 20–27.
2. Ari BC, Sahin E. Anterior cutaneous nerve entrapment syndrome: an underestimated diagnosis. Cureus. 2023; 15(11): e48165, doi: 10.7759/cureus.48165, indexed in Pubmed: 38046717.
3. Jacobs MLYE, Janssen L, Stassen LPS, et al. Visceral symptoms in patients with anterior cutaneous nerve entrapment syndrome (ACNES): expression of viscerosomatic reflexes? Hernia. 2024; 28(1): 127–134, doi: 10.1007/s10029-023-02827-7, indexed in Pubmed: 37393208.
4. Clarke S, Kanakarajan S. Abdominal cutaneous nerve entrapment syndrome. Cont Edu Anaesth Crit Care Pain. 2015; 15(2): 60–63, doi: 10.1093/bjaceaccp/mku016.
5. Trescot AM. Cryoanalgesia in interventional pain management. Pain Physician. 2003; 6(3): 345–360, indexed in Pubmed: 16880882.

6. Hebbard P, Fujiwara Y, Shibata Y, et al. Ultrasound-guided transversus abdominis plane (TAP) block. Anaesth Intensive Care. 2007; 35(4): 616–617, indexed in Pubmed: 18020088.

7. Sawynok J. Topical and peripherally acting analgesics. Pharmacol Rev. 2003; 55(1): 1–20, doi: 10.1124/pr.55.1.1, indexed in Pubmed: 12615951.

8. Moore RA, Wiffen PJ, Derry S, et al. Gabapentin for chronic neuropathic pain and fibromyalgia in adults. Cochrane Database Syst Rev. 2011(3): CD007938, doi: 10.1002/14651858.CD007938.pub2, indexed in Pubmed: 21412914.

9. Hayden JA, van Tulder MW, Malmivaara A, et al. Exercise therapy for treatment of non-specific low back pain. Cochrane Database Syst Rev. 2005; 2005(3): CD000335, doi: 10.1002/14651858.CD000335.pub2, indexed in Pubmed: 16034851.

10. Williams AC, Eccleston C, Morley S. Psychological therapies for the management of chronic pain (excluding headache) in adults. Cochrane Database Syst Rev. 2012; 11(11): CD007407, doi: 10.1002/14651858.CD007407.pub3, indexed in Pubmed: 23152245.

11. Vickers AJ, Cronin AM, Maschino AC, et al. Acupuncture for chronic pain: individual patient data meta-analysis. Arch Intern Med. 2012; 172(19): 1444–1453, doi: 10.1001/archinternmed.2012.3654, indexed in Pubmed: 22965186.

Table 1. Possible therapeutic options in this case scenario [5–11]

Therapeutic option	Description	Indications	Advantages	Disadvantages
I. Local anesthetic injections	Injection of local anesthetic at the site of nerve entrapment	Diagnostic and therapeutic for ACNES	Immediate pain relief	The short duration of the effect
II. TAP block	**Regional anesthesia technique targeting nerves in the abdominal wall**	**Moderate to severe ACNES pain**	**Longer duration of pain relief**	**Requires expertise, potential complications**
III. Oral analgesics	NSAIDs, acetaminophen for mild to moderate pain	Mild to moderate pain	Non-invasive, easy administration	Limited efficacy in severe pain, side effects
IV. Opioid analgesics	Step 2 opioids for moderate pain, Step 3 opioids for severe pain	Moderate to severe pain	Effective for severe pain	Risk of tolerance, dependence, side effects
V. Topical analgesics	Lidocaine patches, capsaicin cream	Localized pain	Targeted relief, minimal systemic effects	Limited efficacy, skin irritation
VI. Anticonvulsants	Gabapentin, pregabalin for neuropathic pain	Neuropathic pain	Effective for neuropathic pain	Sedation, dizziness, potential for misuse
VII. Antidepressants	Tricyclic	Neuropathic pain,	Effective for chronic pain	Side effects, potential for

	antidepressants (*e.g.*, amitriptyline), SNRIs	comorbid depression	and depression	drug interactions
VIII. Physiotherapy	Physical therapy, abdominal muscle exercises	Adjunctive therapy for chronic pain	Improves muscle strength, reduces pain	Requires patient motivation and participation
IX. Psychological support	Counseling, CBT	Chronic pain with a psychological component	Addresses emotional and psychological aspects	Requires access to trained professionals
X. Surgical intervention	Neurectomy, nerve decompression	Refractory ACNES not responding to other treatments	Potentially curative for severe cases	Invasive, potential surgical risks
XI. Acupuncture	Traditional Chinese medicine technique	Adjunctive therapy for pain management	Minimal side effects, complementary approach	Variable efficacy, requires multiple sessions

ACNES — anterior cutaneous nerve entrapment syndrome; CBT — cognitive-behavioral therapy; NSAIDs — non-steroidal anti-inflammatory drugs; TAP — transversus abdominis plane; SNRIs — serotonin-norepinephrine reuptake inhibitors

Table 2. Differential diagnoses in a palliative medicine setup

Condition	Key features	Diagnostic tests

I. ACNES	Sharp, localized abdominal pain, positive Carnett's sign, pain not associated with visceral symptoms	Positive Carnett's sign, diagnostic nerve block
II. Cancer-related pain	Persistent, progressive pain localized to a tumor site, possible palpable mass	Imaging (CT, MRI), biopsy
III. Opioid-induced constipation	Abdominal distension, reduced bowel movements, discomfort, bloating	Clinical diagnosis, abdominal X-ray
IV. Malignant bowel obstruction	Colicky abdominal pain, vomiting, constipation, abdominal distension	Abdominal X-ray, CT scan
V. Peritoneal carcinomatosis	Diffuse abdominal pain, ascites, history of abdominal malignancy	Ultrasound, CT scan, paracentesis
VI. Chronic pancreatitis	Persistent epigastric pain radiating to the back, weight loss, steatorrhea	Serum amylase/lipase, abdominal CT or MRI
VII. Mesenteric ischemia	Severe, sudden abdominal pain, risk factors like atrial fibrillation, heart failure	CT angiography, mesenteric Doppler ultrasound
VIII. Hepatomegaly/liver metastases	Right upper quadrant pain, jaundice, weight loss, anorexia	Liver function tests, abdominal ultrasound, CT
IX. Ascites	Abdominal distension, shifting dullness, fluid wave, underlying liver disease or malignancy	Ultrasound, paracentesis
X. Peptic ulcer disease	Epigastric pain, possible GI bleeding, nausea, melena	Endoscopy, *Helicobacter pylori*, testing
XI. GERD	Burning epigastric pain, and acid regurgitation,	Clinical diagnosis, endoscopy

	exacerbated by lying down	
XII. Infectious colitis	Diarrhea, abdominal pain, fever, immunocompromised status	Stool culture, colonoscopy
XIII. Opioid withdrawal	Abdominal cramping, agitation, sweating, nausea, diarrhea	Clinical diagnosis, patient history

ACNES — anterior cutaneous nerve entrapment syndrome; CT — computed tomography; GERD — gastroesophageal reflux disease; GI — Gastrointestinal; MRI — magnetic resonance imaging