

Pinch sign for acute lateral cutaneous nerve entrapment syndrome (LACNES)

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DESCRIPTION

An 18-year-old woman with no remarkable medical history presented with sudden onset of left-sided abdominal pain that manifested after she bent forward in her chair to pick something up. The pain intensified whenever she rotated her trunk. The day before visiting my centre, she visited another hospital where she was diagnosed with unexplained abdominal pain and prescribed painkillers. These drugs did not provide pain relief. Her contrast-enhanced thoracoabdominal CT findings were unremarkable.

When I examined her, she rated her pain intensity as 8 on a 10-point scale. She experienced locoregional flank pain affecting the Th8 vertebra. Physical examination revealed a small maximally sensitive spot along the midaxillary line (video 1). Pinching this spot and lifting the skin elicited intense pain, and light pulling elicited sharp pain (pinch sign positive). Furthermore, thermosensitivity and pain sensitivity differed in each side of her body.

I diagnosed her with acute lateral cutaneous nerve entrapment syndrome (LACNES).¹ I prescribed a 5 mL local injection of 1% lidocaine and within 10 min, her self-reported local pain intensity decreased from 8 to 0 on the 10-point scale. At a follow-up phone call 3 months later, her pain had completely disappeared.

LACNES is a subtype of anterior cutaneous nerve entrapment syndrome (ACNES). Maatman *et al*^{1,2} indicated that LACNES is an underdiagnosed form of neuropathic flank pain caused by disturbances in the lateral cutaneous branches of the intercostal nerves arising from the Th7–12 vertebrae. To diagnose LACNES, Maatman *et al*¹ suggested that three of the following criteria should be met: (1) >3 months history of locoregional flank pain; (2) a fingertip-sized area of constant tenderness in the flank along the midaxillary line, with pressure eliciting high-intensity pain; (3) altered skin sensations—such as hypoesthesia, hyperesthesia or altered cold perception—in surrounding areas; and (4) negative pinch test results surrounding the tender spot. This present case met all but the first of these criteria.

In a retrospective analysis of 30 patients with LACNES (70% women; median age, 52 years; range, 13–78 years) who met all the criteria of Maatman *et al*, the median time from onset to diagnosis was >18 months. For unclear reasons, pain was more common on the right side. The skin pinch test yielded positive results in 90% of patients. All cases were treated with 5–10 mL of 1% lidocaine



Video 1 Typical pinch sign positive. Pinching the point indicated elicited very intense, momentary pain.

injection, which represents trigger point injections used to treat ACNES, and the long-term efficacy rate was >50%.^{2,3} However, local lidocaine injections may be ineffective in patients with spatially extensive pain. Regional neurotomy and pulsed radiofrequency therapy reportedly provide long-term pain relief. However, their effectiveness is unconfirmed.^{1,3}

Despite recent advances in imaging technology, LACNES is considered an underdiagnosed condition.^{1,4,5} To establish a definitive diagnosis in patients with unidentifiable pain, physicians must carefully investigate pain duration, extent of the nociceptive dermatome, presence or absence of a pinch sign and circumstances in which pain is induced while considering differential diagnosis as shown in Box 1.

Physicians should also consider LACNES as a potential diagnosis when determining whether pain is neuropathic.

Box 1 Differential diagnosis of LACNES

LACNES-like pain

- ▶ Abdominal myofascial pain syndrome
- ▶ Abdominal wall (haematoma, endometriosis, tumour, tear)
- ▶ Radiculopathy (diabetic, traumatic)
- ▶ Scar tissue
- ▶ Slipping rib syndrome
- ▶ Rib abnormalities
- ▶ Postherpetic neuralgia
- ▶ Neurofibroma
- ▶ Schwannoma
- ▶ Herniated disk

LACNES, lateral cutaneous nerve entrapment syndrome.



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Learning points

- ▶ Lateral cutaneous nerve entrapment syndrome (LACNES) is a subtype of anterior cutaneous nerve entrapment syndrome and may easily be underdiagnosed.
- ▶ The most useful finding for clinical diagnosis is the pinch sign.
- ▶ Physicians should consider LACNES as a potential diagnosis when evaluating atypical lateral thoracic or lateral abdominal pain.

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