

Introduction

- Autologous iliac crest bone grafting is common in orthopedic and spine surgery.
- A frequent complication is postoperative pain at the posterior iliac crest often due to superior cluneal nerve injury or entrapment called cluneal neuralgia.
- This neuropathic pain is frequently misdiagnosed as nonspecific low back pain, delaying proper management.
- The superior cluneal nerves are particularly vulnerable during posterior graft harvesting.

Case Description

- A 75-year-old male presents to pain clinic with chronic low back, right hip, and iliac crest pain.
- His pain is described as constant, dull, occasionally sharp, and localized to right iliac crest/PSIS region.
- Onset was >20 years ago after cervical spine surgery with iliac crest graft harvest.
- His pain worsened with activity and ambulation and required a cane for assistance.
- Prior treatments included topical agents, muscle relaxers, gabapentin, and opioids with minimal relief.
- Physical exam revealed focal tenderness over the right iliac crest in superior cluneal nerve distribution and ruled out radiculopathy, sacroiliac joint, or intra-articular hip pathology..
- Superior cluneal nerve block gave him ~70% symptom relief.
- He underwent percutaneous peripheral nerve stimulation (PNS) leading to marked functional improvement.
- Permanent PNS implant was placed with sustained pain relief and discontinuation of cane use.



Figure 1: Fluoroscopic image identifying the remnant right iliac crest demonstrating percutaneous lead being guided along the right superior cluneal nerve course

References

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Discussion

- Iliac crest donor site pain is a well-known postoperative complication.
- Mechanism is an injury or entrapment of superior cluneal nerves crossing the iliac crest.
- May occur via osteofibrous tunnel entrapment or direct trauma during graft harvest.
- Can present as localized tenderness over the posterior iliac crest, radiating to gluteal/lateral thigh regions.
- Early recognition of cluneal neuralgia prevents chronic pain misattribution.
- PNS offers a targeted, durable treatment option for refractory cases.

Conclusion

- Superior cluneal neuralgia (SCN) is an under-recognized cause of chronic iliac crest and low back pain.
- It is frequently misdiagnosed as lumbar, sacroiliac, or hip pathology leading to delays in treatment.
- Physical exam and diagnostic nerve block are key to confirming SCN.
- Conservative therapies (medications, topical agents) often provide limited benefit.
- Superior cluneal nerve block offers diagnostic value and short-term relief.
- PNS can provide sustained pain reduction and functional improvement in refractory cases.
- Early recognition and targeted interventions improve long-term outcomes.
- Incorporating SCN assessment into evaluation of chronic low back or donor-site pain can prevent unnecessary treatments.