Interventional Management of Refractory Lower Extremity Pain in Metastatic Femoral Disease: A Case Report

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BACKGROUND & OBJECTIVES

- Pain associated with metastatic bone disease may be refractory to multimodal medical therapy and presents unique challenges for interventional pain management.[1] We present a case of refractory lower extremity pain secondary to metastatic femoral disease which highlights the complexity of treating cancer-related pain.

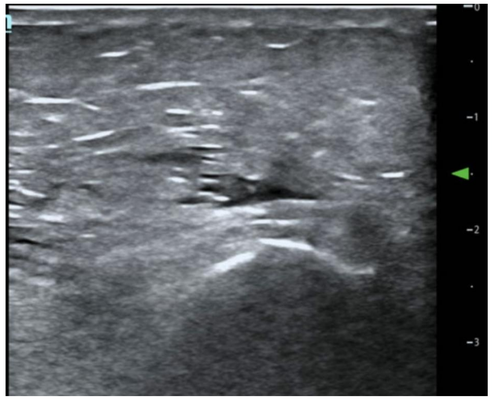
CASE DETAILS

- 82-year-old woman with metastatic clear cell renal cell carcinoma involving the right femur
- Developed a pathologic femur fracture with progressive disease despite: Intramedullary fixation, Postoperative radiation (30 Gy), Subsequent proximal femoral replacement
- Persistent mixed neuropathic and nociceptive pain involving the distal femur, knee, medial calf, and ankle
  - Severe pain: 9/10 at rest and 10/10 with movement
  - Significant functional impairment with wheelchair dependence and loss of functional independence
- Pain remained poorly controlled despite multimodal palliative therapy including Transdermal fentanyl, Oxycodone, Gabapentin, and Acetaminophen

CASE DETAILS

- Fluoroscopy-guided genicular nerve block aborted due to extensive metastatic destruction of the distal femur and absence of safe, stable osseous landmarks
- Ultrasound-guided saphenous nerve block performed as an alternative, with limited pain relief
- Ultrasound-guided femoral peripheral nerve stimulation (PNS)
- Femoral PNS successfully placed for a 60-day treatment course





OUTCOMES

- Immediate pain improvement following femoral PNS
  - Pain decreased from 7/10 pre-procedure to 3/10 immediately post-procedure
- Sustained partial analgesia during follow-up
- Improvement in pain associated with activities of daily living (ADLs)
- Clinical response supported the femoral nerve as a major contributor to the patient's pain
  - plan for femoral nerve radiofrequency ablation for longer-term analgesia

CONCLUSIONS

This case demonstrates that femoral nerve targeted interventions may provide an effective strategy for managing refractory lower extremity pain caused by metastatic femoral disease when medical management and conventional genicular procedures are not technically feasible.

REFERENCES

1) Mercadante S. Managing difficult pain conditions in the cancer patient. Curr Pain Headache Rep. 2014 Feb;18(2):395. doi: 10.1007/s11916-013-0395-y. PMID: 24407750.

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