

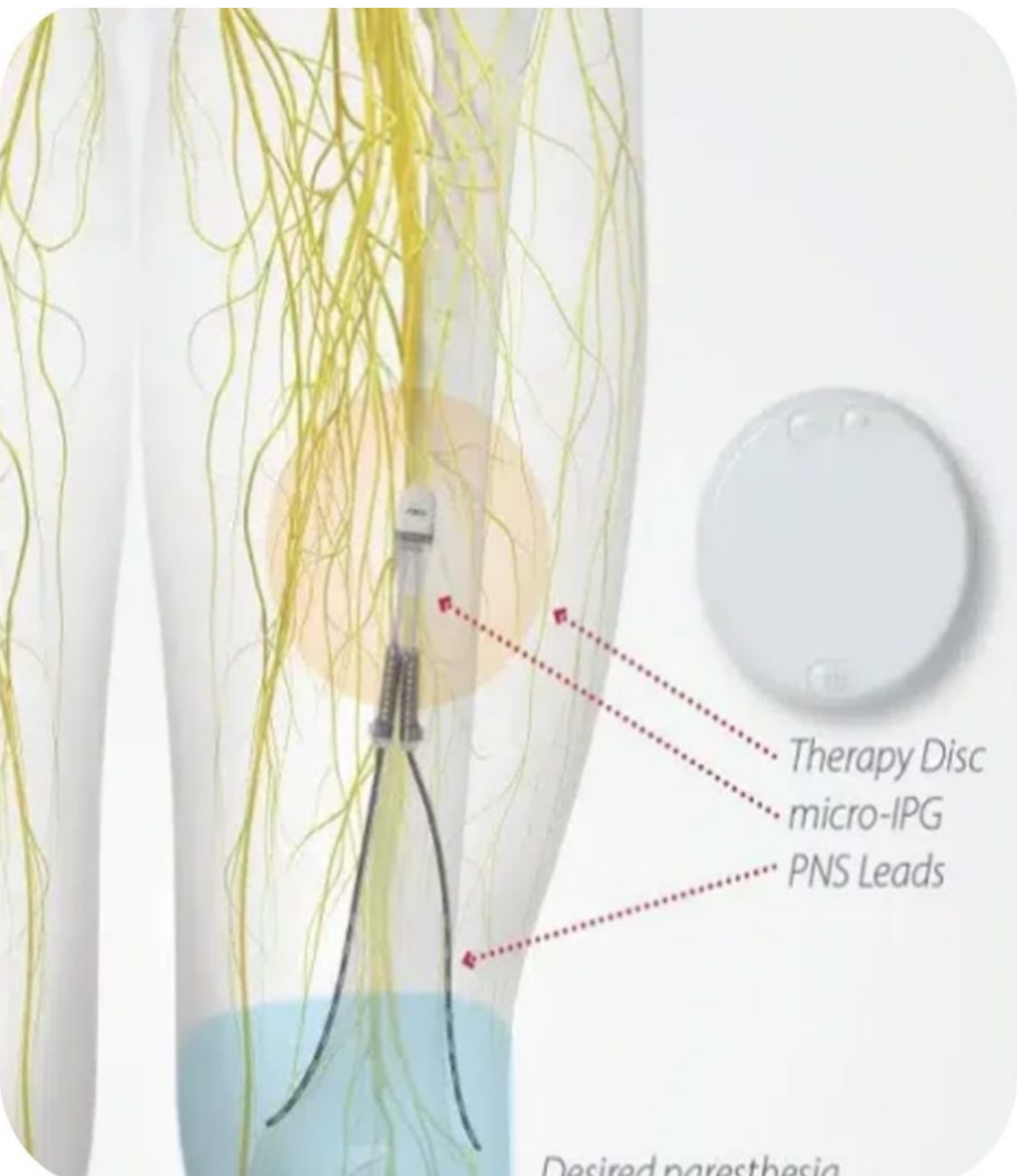
Genicular Peripheral Nerve Stimulator Placement in an ESRD Patient with Thrombocytopenia

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BACKGROUND

- Peripheral nerve stimulator (PNS) implantation may offer a long-term solution for End Stage Renal Disease (ESRD) patients suffering with chronic pain who are not surgical candidates.¹
- ESRD is often associated with thrombocytopenia and platelet dysfunction, potentially increasing the risk for bleeding.²
- In this case report, we describe the placement of a two lead genicular nerve PNS system in a 94 year old man with thrombocytopenia secondary to ESRD.



BACKGROUND/METHODS



- After the patient was positioned and prepped in sterile fashion, fluoroscopy was used to identify the entry points for the stimulator leads and generator.
- The skin was topicalized with 1% lidocaine. A 14 gauge Tuohy needle was advanced to the confluence of the femur and epicondyle (superior medial and lateral) under fluoroscopic guidance.
- After testing stimulation for the target knee, needles were withdrawn and lead locations were verified with fluoroscopy.
- The leads were then tunneled to a pocket formed at the anterior thigh (where a generator was implanted). The lead insertion and generator sites were closed and sterile dressing applied.

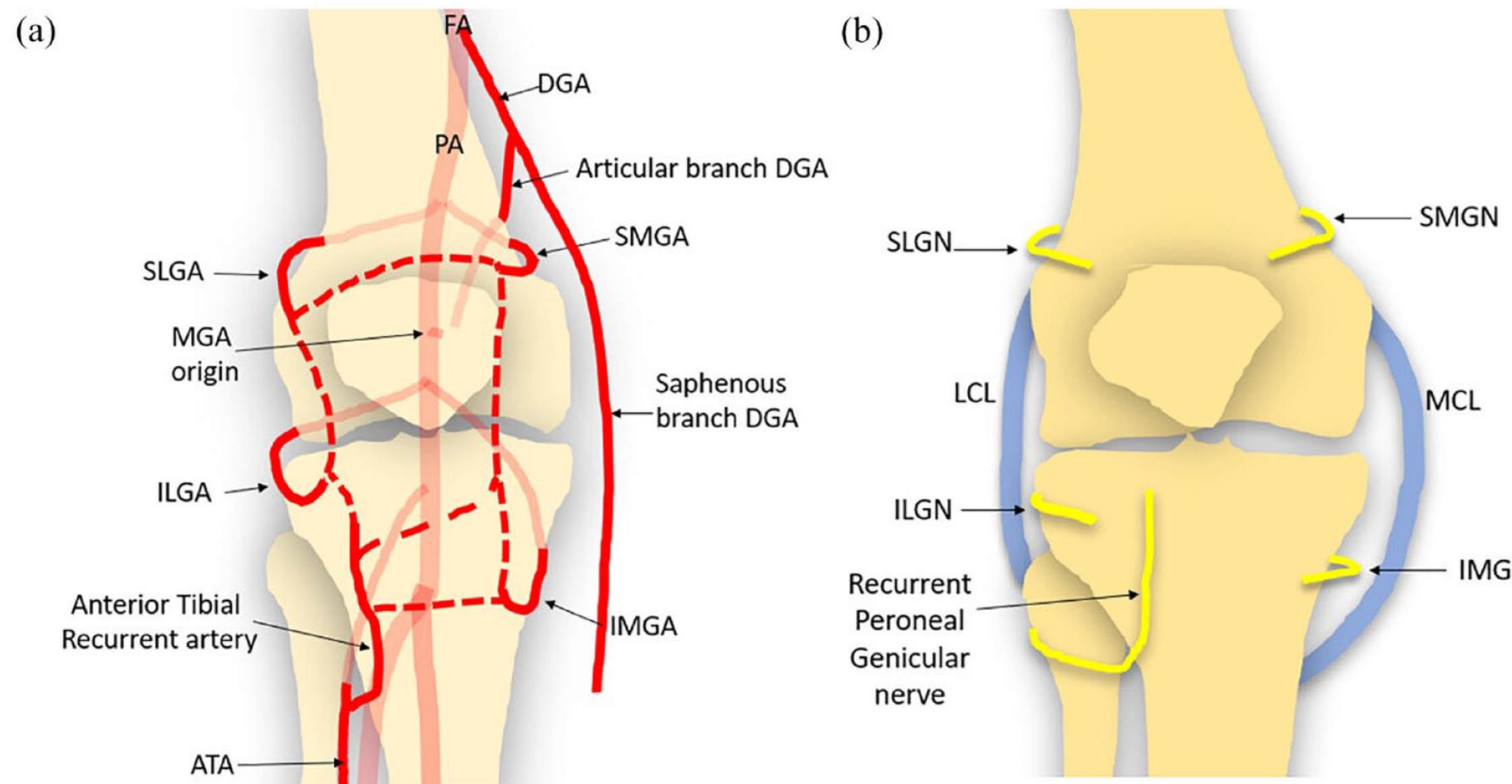


CASE REPORT

- A 94 year-old male with a history of ESRD on dialysis and thrombocytopenia (baseline ~80k) presented after a successful PNS trial at an outside pain office. He had above 80% relief but was not offered an implant. His knee pain, present for multiple years, had worsened after recurrent episodes of septic arthritis requiring arthrocentesis, hospital stays, and antibiotics. The patient tried multiple treatment modalities including physical therapy, NSAIDs, muscle relaxants and steroid injections.
- His physical exam was notable for limited right knee range of motion. X-ray and MRI are consistent with severe chronic degenerative changes.
- After counseling the patient on his higher risk of infection and bleeding secondary to his comorbidities, he was scheduled for a right genicular PNS implant. He had dialysis the day of the procedure and was prescribed an extended course of perioperative antibiotics given his repeated history of septic joint infections.
- The patient reported no complications from the procedure. After programming and initiation of the stimulator, the patient reported his right knee pain as 0/10 when sitting and 2/10 when walking after 1 month. After 8 months, the patient continues to rate his pain as 0/10 when sitting and 1-2/10 when walking.

DISCUSSION

- The American Society of Pain and Neuroscience notes that PNS is generally considered a low-intermediate bleeding risk procedure, particularly when performed in compressible anatomical regions, such as the knee, and may often be performed without discontinuing anticoagulant or antiplatelet therapy.³
- There are no universally established platelet count thresholds specific to PNS implantation; however, expert consensus and neuromodulation literature suggest that a platelet count above 50,000/ μ L is reasonable for low-risk procedures.⁴



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