CASE REPORT: LUMBAR SYMPATHETIC BLOCK FOR PERIPHERAL VASCULAR DISEASE (PVD)

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ABSTRACT

Peripheral Vascular Disease (PVD) is a debilitating condition characterized by reduced blood flow to the lower extremities, often leading to pain, ulceration, and impaired mobility. While surgical interventions such as angioplasty or bypass are potions, minimally invasive Interventional pain procedures like Lumbar sympathetic block (LSB) is an effective intervention aimed at improving circulation and alleviating pain. We present a case of a 50-year-old male with PVD who underwent an LSB for symptom relief. The procedure demonstrated significant improvement in pain levels and circulation, highlighting the role of LSB as a therapeutic option in PVD management.

Introduction

PVD, often secondary to atherosclerosis, results in ischemic pain, claudication, and non-healing ulcers. Sympathetic nerve blockade has been explored as a method to enhance blood flow and relieve ischemic symptoms. Lumbar sympathetic block interrupts the sympathetic supply to the lower limbs, leading to vasodilation and improved perfusion. Here, we report a case where LSB was performed for severe PVD-related pain, demonstrating its efficacy in symptomatic relief.

Case Report

A 50-year-old male patient came with Chief Complaints of Left lower limb pain for 2 weeks. Pain characteristics - Intermittent claudication pain in both legs with difficulty in walking due to pain, Able to walk for only short distance. He also complaints of Rest pain in the left lower limb. NRS score – 9/10. He was a chronic smoker and alcoholic with no comorbidities. On General physical

examination, Skin discoloration present on the affected limb (fig 1) & left leg Peripheral pulse reduced. Ankle-Brachial Index (ABI) was 0.8 (suggestive of PVD) & Ultrasound Findings: Suggestive of arterial insufficiency. Patient was started on Heparin 5000U IV QID with Aspirin and for pain patient was receiving Paracetamol, Brufen and Amitriptyline. Despite these measures patient complained of pain with NRS 7/10. So, Planned for Lumbar Sympathetic Block.

After obtaining informed consent and pre procedure workout, patient was prepared for the procedure with standard NPO guidelines on the day of procedure. Procedure Details: With proper ASA monitoring and a secure IV line patient was positioned in a prone and the procedure was performed under fluoroscopic guidance. Under ASP WITH 22 G 12 cm Quincke needle left lumbar sympathetic block done with 8 ml of 1 % xylocard,0.125% Bupivacaine and 20 mg Triamcinolone at L3 level after obtaining desired contrast spread in AP and lateral view (Fig 2,3). Vital signs were stable throughout the procedure. No sensory or motor deficits post-procedure

Outcome and Follow-up

- Immediate post-procedure improvement in pain score NRS – 2/10
- Increased skin temperature indicating improved circulation
- No complications observed
- The patient was discharged with instructions for wound care, lifestyle modifications, and medication (Gabapentin 300 mg, antiplatelets, and vasodilators).
- Follow-up after 2 weeks showed sustained relief of symptoms. NRS 1/10

Discussion

PVD is a progressive vascular disorder that significantly impairs quality of life. While surgical interventions such as angioplasty or bypass are options, conservative and interventional pain management techniques like LSB play a crucial role in symptomatic relief. LSB leads to vasodilation by blocking the sympathetic nervous system, thereby improving peripheral circulation. This case highlights the efficacy of LSB as a minimally invasive, yet effective, option for pain management and circulation enhancement in PVD patients.

Conclusion

Lumbar sympathetic block is a viable and effective intervention for PVD-related pain. This case reinforces its role in multimodal pain management, especially in patients with contraindications for surgical interventions. Further studies and long-term follow-ups are needed to establish its role in disease progression and quality of life improvement.

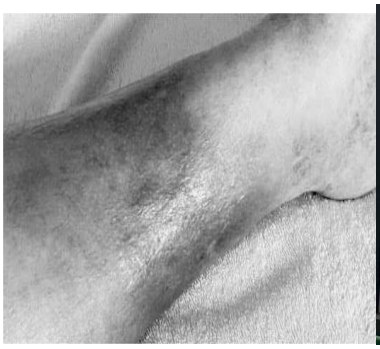

Fig 1 Skin Discoloration

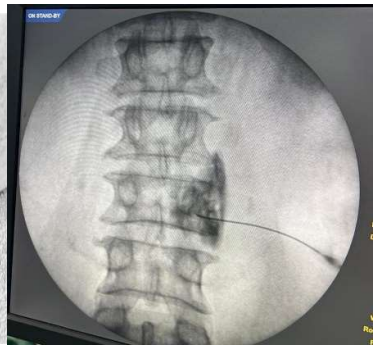

Fig 2:Dye spread in AP image

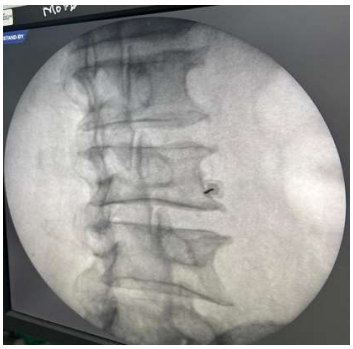

Fig 3 -Dye spread in lateral image