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**Case Report**

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## Recurrent Carcinoma Rectum Patient Presented with S<sub>1</sub> Radiculopathy- An Unusual Presentation



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### ABSTRACT

Radiculopathy results from nerve root impingement or inflammation that has progressed enough to cause neurologic symptoms in the areas that are supplied by the affected nerve. In S<sub>1</sub> radiculopathy leg pain is more than the back pain. Pain occurs in posterior aspect of thigh and posterolateral aspect of the leg and radiate to the dorsum of the foot. Common causes are L5 –S<sub>1</sub> disc herniation, compressing S<sub>1</sub> nerve root, lateral canal stenosis and less commonly by tumour. We present a rare case of recurrent carcinoma rectum, presented with clinical symptoms of single nerve root involvement, S<sub>1</sub> dermatome. In carcinoma rectum, usually, extension of tumour via perineural spread to inferior hypogastric plexus involves entire lumbosacral plexus. In our case leg pain was more than back pain managed successfully after 60-70% of pain relief with diagnostic S<sub>1</sub> transforaminal block.



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## INTRODUCTION

A 63 years old, normotensive, non-diabetic patient, presented in our hospital with the complaints of bleeding per rectum of 6 months duration. Colonoscopy showed ulcerative grow thin rectum and biopsy proved moderately differentiated adenocarcinoma rectum. Patient was referred for Neo adjuvant radiochemotherapy. Follow up PET- CT after 6 weeks showed no residual disease. He underwent abdominoperineal resection, followed by 12 cycles of Chemotherapy for 6 months. During surveillance, PET CT after 16 months showed recurrent disease, not responding to chemotherapy. Later he developed severe left leg pain and referred to pain physician. Pain was typically in posterior thigh, posterior leg and heel in S<sub>1</sub> dermatome. Leg pain was more than back pain. NRS was 8/10. Pain was characterised by sharp, shooting, burning, stabbing, electric shock type, radiating down the posterolateral aspect of leg till the sole. Pain was superficial and localised associated with numbness and tingling. Pain was aggravated while sitting, standing and walking, relieved by lying down with left hip and knee flexed. His pain was devastating, led to functional impairment, immobility, social isolation and negative impact on his survival. He was worried of dying in pain. On examination left straight leg raising(SLR) -40°. Motor power on planter flexion was 4/5 and sensory examination was normal with diminished ankle reflex. Bladder and bowel functions was normal. He was prescribed tablet nortryptomer P (pregabalin+nortryptylline) 75mg one at bedtime and tramadol+paracetamol one tablet three times a day. After conservative management failure, under fluoroscopic guidance diagnostic left S<sub>1</sub> nerve root block was given with 1% lignocaine and 10mg of steroid. Patient had 60% pain relief after 10-15 minutes. Subsequently, Pulse Radiofrequency Ablation of S<sub>1</sub> root was done in next setting which improved his Quality of life by regaining his physical activities and going back to his daily work.

## DISCUSSION

Review of literature supports the concept of perineural spread of rectal cancer. Route of spread to the lumbosacral plexus<sup>[1]</sup> starts with the invasion of inferior hypogastric plexus with subsequent spread of the carcinoma using the parasympathetic pelvic and the sympathetic sacral splanchnic nerves. Once the tumour reaches the sacral plexus, it can continue to spread within neural structures and cause various symptoms in relation to the affected structures known as LSP. Neoplastic LSP<sup>[2]</sup> typically presents with pain followed by weakness and numbness within weeks. Positive SLR is usually present. The best imaging modality to

visualise neural involvement is MRI. PET/CT may demonstrate increased metabolic activity but limited by resolution. Presentation of single dermatomal involvement is unlikely with S1 nerve root involvement because once tumour reaches LSP it continues to spread distally to sciatic nerve and proximally to spinal nerve roots. We believe that not only disc herniation but rectal tumour can also present with single nerve root compression symptoms. Thus a better understanding, detail history, clinical examination and its appearance on imaging and diagnostic block plays very important role in diagnosing and further therapeutic management of a patient by a pain physician. Our idea of presenting this case report is to emphasize that all S1 radiculopathy are not because of disc herniation, sometimes malignancies like carcinoma rectum may also present with similar symptoms and managed successfully with pain intervention like diagnostic S1 transforaminal block with 60-70% pain relief followed by further pulse radiofrequency ablation.

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