

CASE REPORT

Role of Diagnostic Block in S1 Radiculopathy in a Patient of Carcinoma Rectum with Leg Pain

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ABSTRACT

Although the incidence of mortality from colorectal cancer is declining, it is still the fourth most common condition in men and the third most common in women worldwide. Several studies have reported neoplastic involvement of lumbosacral plexus, which results in the patient suffering. The L5-S1 and sciatic nerves are most frequently involved. Clinically, these patients present with pain followed by numbness and weakness. We propose a thorough knowledge of lumbosacral plexus anatomy and diagnostic block, an important tool of pain physician which can be effectively used to diagnose, treat and reduce cancer pain.

Keywords: Colorectal cancer, Diagnostic block, Lumbosacral plexus.

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CASE REPORT

A 43-year-old patient, normotensive, nondiabetic, with complaints of bleeding per rectum since 1 year duration, was admitted in our hospital. Colonoscopy showed ulcerative growth and biopsy proved moderately differentiated adenocarcinoma. In view of MRI abdomen and pelvis findings suggestive of altered signal intensity lesion at anterior and left lateral walls at anorectum about 2 cm above the anal verge, a growth free from adjacent structures, enlarged left internal iliac nodes present, patient was referred for neoadjuvant chemotherapy (NACT) and radiation therapy (RT). He received 49.95 Gy/28# external beam RT to the pelvis with two cycles of concurrent

chemotherapy in August 14. Post-NACT, RT, positron emission tomograph (PET) showed no evidence of metabolically active disease elsewhere in the body. The MRI of the pelvis showed partial response to therapy, with lesion extending up to upper aspect of anal sphincter (Fig. 1). He underwent abdominoperineal resection on September 2014; histopathological examination showed residual viable tumor, moderately differentiated adenocarcinoma of rectum. He completed 12 cycles of Folfox-based chemotherapy until May 2015. Repeated contrast-enhanced computed tomography abdomen and carcinoembryonic antigen (CEA) and colonoscopy showed as normal. Follow-up of PET/computed tomography (CT) in December 15 (Fig. 2) showed metastatic active left internal iliac lymph nodes. Fine-needle aspiration cytology was positive for malignant cells in January 16 and CEA was 158 ng/mL. He received six cycles of FOLFIRI-based CT, which lasted until June 16. He later developed hydronephrosis of left kidney for which double J stenting was done. Following this, he developed severe pain in his left leg typically in posterior thigh, posterior leg, heel till the sole, and S1 dermatome for the past 1 month. The numeric rating scale score was 6 to 7, pain was burning and electric shock type with tingling sensation and numbness in S1 dermatome. Pain was aggravated while sitting, standing, and walking and was relieved by lying down with left hip and knee flexed. Left straight leg raise (SLR) was 40°. Motor power plantar flexion was 4/5 and sensory examination was normal. Bladder and bowel functions were normal. He was put on tab nortryptomer P 75 mg, one at bedtime, and paracetamol and tramadol combination (ultracet) was given one tablet three times a day. Diagnostic S1 nerve root block was planned after conservative management failure. Under fluoroguidance diagnostics, left S1 nerve root block (Figs 3 and 4) was given with 1% lignocaine and 10 mg of steroid. Patient had 60% pain relief after 10 minutes. The pulsed radio-frequency ablation of S1 root was advised to the patient in next setting. Which will improve his Quality of life by regaining his physical activities

DISCUSSION

Review of literature supports the concept of perineural spread of rectal cancer. Route of spread to the lumbosacral plexus¹ starts with the invasion of inferior hypogastric plexus with subsequent spread of the carcinoma using

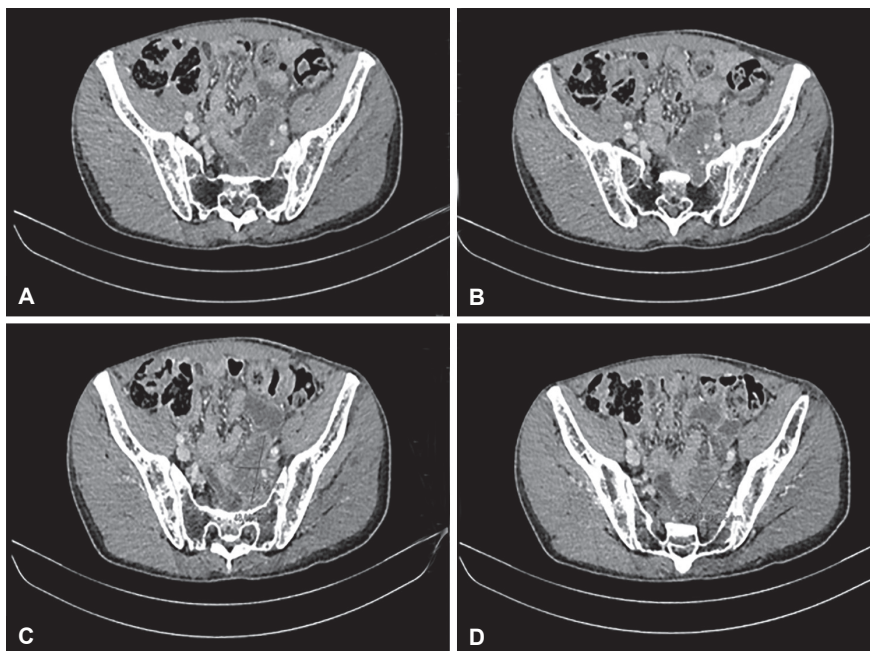
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Figs 1A to D: Left presacral mass involving left sacral nerve root

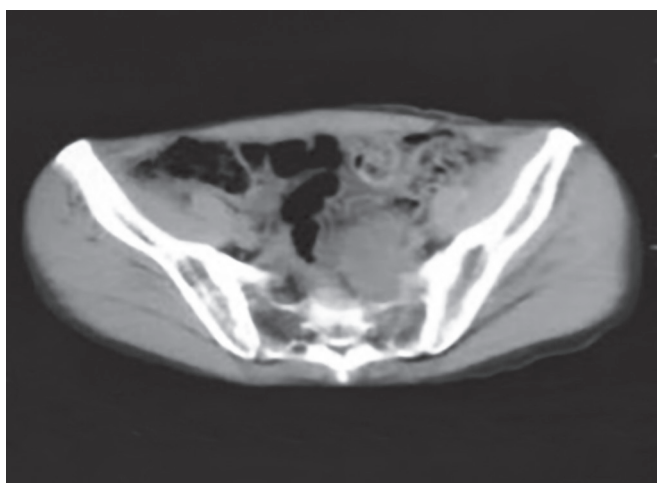


Fig. 2: Selected PET/CT image highlighting compression

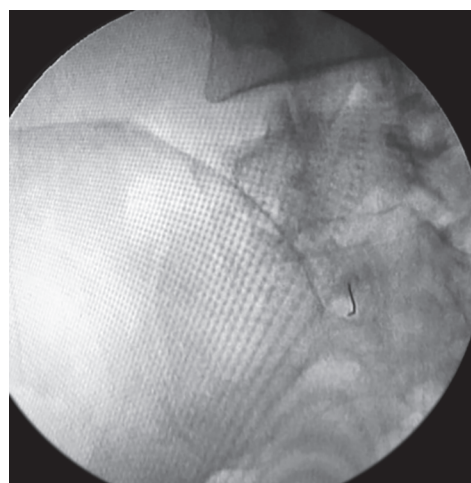


Fig. 3: Fluoroscopic anteroposterior view of needle approaching left S1 foramen

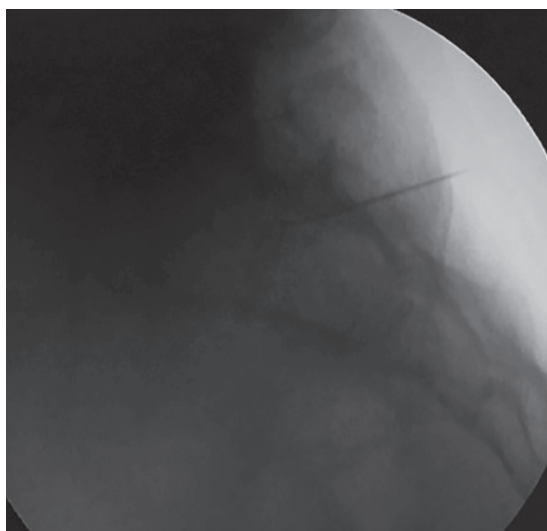


Fig. 4: Fluoroscopic lateral view of needle position reaching sacral nerve root

the parasympathetic pelvic and the sympathetic sacral splanchnic nerves. Once the tumor reaches the sacral plexus, it can continue to spread within neural structures in a proximal as well as a distal manner, and causes various symptoms in relation to the affected structures known as a neoplastic lumbosacral plexopathy (LSP). Neoplastic LSP² typically presents with pain followed by weakness and numbness within weeks. Positive SLR is usually present. The best imaging modality to visualize neural involvement is MRI. The fluorodeoxyglucose PET/CT may demonstrate increased metabolic activity, but is limited by resolution. We believe in not only better understanding, history, clinical examination, and its appearance on imaging, but realize that diagnostic block also plays a very important role in diagnoses and further management of a patient by a pain physician. Taking into consideration the patient's symptoms, diagnostic S1 nerve

root block was planned and given, which gave the patient 60 to 70% pain relief. This was the reason why patient was planned for PRFA of S1.

REFERENCES

1. Babu MA, Spinner RJ, Dyck PJ, Amrami KK, Nathan MA, Kawashima A, Howe BM. Recurrent prostatic adenocarcinoma with perineural spread to the lumbosacral plexus and sciatic nerve, comparing high resolution MRI with torso and endorectal coils and F-18 FDG and C11 choline PET CT. *Abdom Imaging* 2013 Oct;38(5):1155-1160.
2. Capek S, Howe BM, Amrami KK, Spinner RJ. Perineural spread of pelvic malignancy to the lumbosacral plexus and beyond, clinical and imaging pattern. *Neurosurg Focus* 2015 Sep;39(3):E14.