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## Case Report

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# Fluoroscopic Splanchnic Neurolysis - Effective & Economical Than Endoscopic USG Celiac Neurolysis- Experience in A Series of Cases



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## ABSTRACT

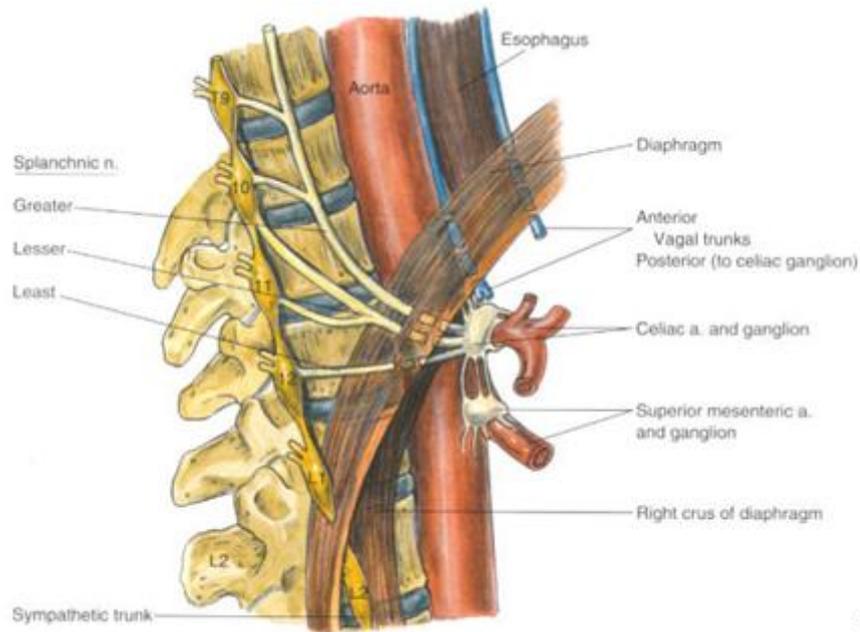
Upper abdominal malignancies are advanced and often incurable when diagnosed; palliative care is key. Mainstay treatment modalities include conservative management by WHO Ladder and intervention in the form of celiac plexus neurolysis via Fluoroscopy/ Endoscopic ultrasound (EUS) / CT guided. However, in advance abdominal malignancies, gross anatomical distortion of the area around celiac plexus or plexus encasement either by tumour or metastatic lymph nodes lead to failure / inadequate pain relief after celiac block. We recommend Catching pain generator proximally in pain pathway where they are protected from tumour distortion can be eminently done under LA by the less invasive and more patient friendly fluoroscopic guided splanchnic neurolysis<sup>3</sup> (FSN) technique.



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## INTRODUCTION



Anatomy of Splanchnic nerves

Over a period of six months, three patients were referred to Pain Clinic for pain management after inadequate pain relief following EUS guided celiac neurolysis.

### CASE 1

A 31 year old female patient case of metastatic carcinoma duodenum with upper abdominal pain with history of cerebellar ataxia at the age of 11 presented with pain which was deep seated, diffuse upper abdominal radiating to back. NRS - 10/10. EUS guided celiac neurolysis was done however inadequate pain relief required intravenous patient control analgesia pump (IVPCA) morphine @2mg/hr attendants were non-compliant and unhappy with the situation. In view of advanced disease and poor performance status (PS) chemotherapy was not contemplated and was then referred to pain clinic. Post counseling of her parents, FSN was done bilaterally at T<sub>12</sub> level via retrocrural approach (Fig 3,4) under fluoroscopic guidance after 1l of saline bolus and intravenous antibiotic. Patient pain was significantly reduced.

### CASE 2

A 65 year old male patient case of metastatic carcinoma gallbladder with lymphadenopathy with upper abdominal diffuse, deep seated pain. He was referred to pain clinic after

inadequate pain relief post EUS guided celiac block. He refused other cancer related treatment. FSN gave him good relief; he went back to his village.

### CASE 3

Case of locally advanced carcinoma pancreas<sup>1</sup> with vascular invasion and epigastric pain. NRS-9/10. Following inadequate relief from EUS guided Celiac plexus block, FSN was repeated after 1litre of IV fluid Normal saline (NS) bolus; we could reduce his opioid doses and NRS score also reduced from 9 to 5.



FIG.2 CT image of advance carcinoma Pancreas Case 3

### RESULTS

NRS pain score reduces in all three cases as shown in Fig 5. As the science is evolving daily certain new interventions are coming up. Abdominal malignancies usually require pain and palliative care when diagnosed. It is thus a challenge for pain physician to make them pain free especially in locally advanced carcinomas. Celiac plexus block can be given by different approaches utilizing fluoroscopy, ultrasound and CT guidance. Though radiation is a hazard with fluoroscopy the fluoroscopic guided splanchnic neurolysis<sup>2</sup> is a more effective alternative in locally advanced diseases, much more economical, more predictable as needle

is placed more proximally in pain pathway. Success rate of neurolytic interventions can be enhanced by – i) Proper patient selection ii) Pre- block review by CT/PET-CT/MRI iii) Earlier referral for interventions by treating team iv) Going by cost comparison, EUS technique is many time more expensive and this should also be taken into account in a country like India; fluoroscopic splanchnic neurolysis scores way above the EUS guided celiac neurolysis and can be performed successfully even in patients with distorted/ encased celiac plexus.

To conclude we look forward for more cases so that statistically we can prove with comparison that timely fluroscopic guided splanchnic neurolysis has better impact on patient's quality of life (QOL) by better pain management than more costly EUS guided celiac neurolysis. Too early to say in a small case series like ours, our experience is that in advance abdominal malignancies, fluoroscopic splanchnic neurolysis is preferable. It is effective, economical, reduces financial burden on patient and does not require special equipment like endoscopic USG.

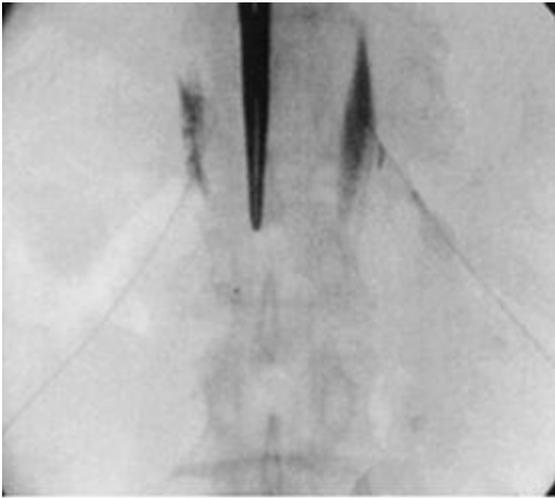


Fig 3 Fluroscopic AP view of dye spread at T<sub>12</sub> vertebra



FIG 4 Lateral fluroscopic view of needle approaching at T<sub>12</sub>

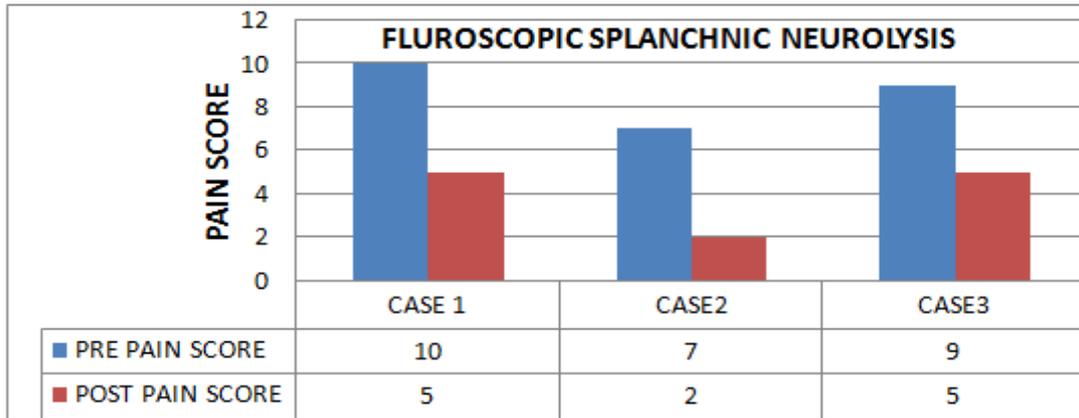


Fig 5- Pain score pre & post FSN block

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