



C-ARM GUIDED COELIAC PLEXUS BLOCK FOR MALIGNANT NEOPLASTIC LESION OF SUPRARENAL GLAND

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ABSTRACT

A 65 year old female presented with pain abdomen and was diagnosed to be having a malignant suprarenal gland tumour . Patient was not relieved of pain with conservative management, therefore coeliac plexus block under C- ARM guidance was planned. Coeliac plexus blockade with local anaesthetic (LA) was introduced as early as in 1914.¹ Indications for coeliac block- Abdominal pain of neoplastic/non malignant origin, Acute pain secondary to arterial embolisation of the liver (cancer therapy), Neurolysis of coeliac plexus to palliate pain of retroperitoneum/upper abdominal malignancy. Diagnostic coeliac plexus block given with 15 ml 0.5% bupivacaine under C-ARM guidance and patient was relieved from pain for two days. Later therapeutic block was given with 20 ml of 50% of absolute alcohol on each side under C-ARM guidance. Patient was relieved from pain and followed up for one week and discharged satisfactorily. Conclusion: Coeliac plexus block can be used as a sole pain relief technique for suprarenal gland malignant tumour

KEY WORDS: COELIAC PLEXUS BLOCK, MALIGNANT LESION, C-ARM.

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INTRODUCTION

Coeliac plexus blockade is an injection of steroids with or without local anaesthetic for temporary pain relief, but coeliac plexus neurolysis refers to chemical neurolysis of the afferent pain fibres that transmit pain from intraabdominal viscera. Injection of neurolytic agent such as ethanol or phenol with a local anaesthetic is done to permanently destroy nerve fibres. A 65 year old female presented to the hospital with pain abdomen since two days. Pain was sudden in onset with colicky type and not associated with food intake. Patient gives history of loss of weight. There was no history of nausea, vomiting, constipation and diarrhea. Patient had similar complaints in the past and was not relieved by any medications. Pain was assessed by VAS (Visual analogue scale) scoring system. On examination of cardiovascular, per abdomen and respiratory systems clinically no abnormality detected. Investigations- CBC, RBS, Blood urea, Serum creatinine, Platelet count, ESR were within normal limits. Serum amylase was raised, serum lipase was normal. USG Abdomen showed a large (8x5cms) irregular heterogenous soft tissue tumor with few areas of intra-lesion necrosis in the left supra-renal region. On colour Doppler lesions appeared hyper-vascular, features, suggested left supra-renal gland malignant lesion. FNAC was done for left adrenal mass under USG Guidance. Microscopy showed positive for malignant cells suggestive of carcinoma. CT scan of abdomen and pelvis revealed large, well defined, lobulated soft tissue mass lesion in left supra-

renal region with its morphology and imaging features consistent with a malignant neoplastic lesion of left adrenal origin. Acute pain management was planned with epidural analgesia. Epidural catheter was placed for pain at L1-2 space and catheter fixed at 11 cm and relieved from pain for three days by administering 2ml of 0.5% bupivacaine and buprenorphine 60µgm three times/day. VAS score was 9 before the block and VAS score was 2 after the block. Patient was taken for diagnostic coeliac plexus block as the therapeutic block was planned for pain relief. Patient had been explained about the procedure and consequences, informed consent was taken. 20 G, intravenous line was secured and patient shifted to the operation theatre and all basic monitors were connected. Under all aseptic precautions, patient was placed in prone position. Body of L₁ was identified with C-ARM guidance, Urograffin dye (5ml) was injected through sterile 23G spinal needles on each side. 10ml of 0.5% bupivacaine was injected on either side. Patient was monitored, procedure was uneventful. Pain was relieved till next day. After three days patient was taken up for therapeutic coeliac plexus block. In prone position L₁ was identified and urograffin dye (5ml) was injected through 23G needle on each side under C-ARM. 20ml of 50% absolute alcohol was injected on either side. Patient was monitored and procedure was uneventful. Patient had pain relief and patient was followed up after 2 months.



Figure
C-ARM guided injection of urografin dye.

DISCUSSION

Percutaneous anterior approach described by Wendling in 1917² and the posterior crural approach was described by Kappis in 1919 and later techniques became the standard. Indications for coeliac plexus block-Raynauds phenomenon, phantom limb, pancreatitis, angina abdominis and malignancy. Injectate-Alcohol in 50-100% is the neurolytic drug of choice, its mechanism of action is by extraction of cholesterol, phospholipids and cerebrosides from the neural membrane and precipitation of lipoproteins and mucoproteins³ Phenol \geq 5% in water causes protein coagulation and necrosis when applied directly to the nerves, it has slightly slower onset of action, less efficacy and shorter duration⁴. Phenol also seems to have higher affinity for vascular tissues which rises its concerns over its use in proximity to major blood vessels.

Complications

Hypotension and pain on injection are the most common complications. Percutaneous anterior approach has success rate of 67% - 78%⁵. Supine position is more comfortable than prone position. Success rate of transaortic technique is 85%-93%⁶. It is difficult to determine the incidence of neurological complications. Partial or Total motor paralysis may be due to unintentional Subarachnoid or epidural injection. If a major feeder artery to the spinal cord is thrombosed paraplegia may occur. Effects of treatment depend on VAS pain scores. WHO 3 step ladder pain management is not helpful in many cases due to unacceptable side effects and non-response to drugs. In such cases alcohol nerve block is indicated.

CONCLUSION

Coeliac plexus block can be used as a sole therapeutic modality for pain relief in suprarenal malignant tumor without any significant adverse effects.

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