Computed Tomography Guided Transdiscal Splanchnic Nerve Block for Cancer Pain Treatment

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BACKGROUND

The majority of people with cancer will experience pain. Conservative treatment is effective for more than 90% of patients with cancer related pain. Therefore 5-10% of these patients need in interventional or surgical pain treatment. Interventional methods are different nerve blocks, neurolysis/ ablation, insertion of permanent ports, pumps, stimulation electrodes. Splanchnic/celiac plexus neurolysis is characterizing with high success rate for intractable cancer pain relief.

CASE PRESENTATION

CASE 1

50 years old man with pancreatic head and trunk cancer T4N1M0. Patient's condition: intractable pain in upper abdomen during last two weeks, dysphagia, weight loss Cholecysto-entero, gastro-entero and entero-entero anastomoses performed under epidural+general anesthesia. Open trans abdominal celiac/splanchnic neurolysis could not performed due to tumor and metastases spread. During 7 postoperative days pain relieved by continuous epidural anesthesia (0.2% ropivacain 5ml/hour) on postoperative day 8 epidural catheter removed due to dislodgement Morphine sulphate 10 mg iv injections with 4 hour intervals and cox-2 pathway inhibitors was not sufficient for pain relief (pain score 6-8 VAS). Splanchnic neurolysis performed on postoperative day 14. Patient lay in prone position on the computed tomography table. After marking of injection sites, definition of needles traces and deep local infiltration with 1% lidocain, two 22 gauge 20 cm Chiba needles had been inserted transdiscally on the level of T12/L1. Pain relieved after injection of 4 ml 2% lidocaine on each side10 ml 10% aqueous phenol had been injected on each

side for neurolytic block 0.1 g cefazolin injected intradiscally. Patient had complete pain relief until day 5, when he felt severe continuous pain on his upper right abdomen after two weeks of follow-up incomplete right splanchnic block diagnosed and to perform of repeated right side splanchnic neurolysis had been decided. On day 14 after 1st neurolysis, a 3 ½ inch 25 gauge Quincke needle had been inserted in right retrocrural space on the level of L1. After contrast and 4 ml 2% lidocaine injection, 15 ml 95% alcohol injected Pain relieved completely. No additional analgesia requirements lifetime (10 weeks).

CASE 2

62 years old male with gastric cancer. Cancer recurrence after partial gastrectomy and severe intractable abdominal pain. 120 mg morphine hydrochloride daily, pain scores 6-8 VAS. T12-L1 computed tomography guided transdiscal splanchnic nerve block performed in patient prone position. After marking of injection site at left side from vertebral column and deep infiltration with 1% lidocaine, a 22G 20 cm Chiba needle had been inserted. 0.1g cefazolin injected intradiscally. Intervertebral disk penetrated centrally and contrast spread was equal on both sides between aorta and L1 vertebra. Pain relieved after injection of 5 ml 2% lidocaine and 15 ml 95% alcohol. After procedure pain score 3-4, patient was needed in 10 mg morphine hydrochloride and 150 mg lyrica daily.

CONCLUSION

Computed tomography guided transdiscal splanchnic neurolysis is a safe and effective treatment tool for upper abdomen cancer pain relief. In cases of incomplete neurolysis repeated neurolytic block may be helpful.

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