

81. ENDOSCOPIC ULTRASOUND GUIDED TRANSGASTRIC CELIAC PLEXUS BLOCK; AN ALTERNATIVE FOR PATIENTS WITH CHALLENGING SPINAL ANATOMY

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We present the case of a 68 year old female that was referred to our Pain Clinic for consideration of a Celiac Plexus Block. Three months previous to her visit, the patient started to notice some mid-thoracic back pain. It was attributed to her long standing history of severe scoliosis and was treated with over the counter analgesics. She was then seen by an orthopedic surgeon who obtained spine x-rays and a CT scan. These showed no changes when compared to previous studies. She had marked scoliosis, and was started on physical therapy.

There was no improvement in her back pain over the next 6-8 weeks. The pain progressed, and then was also located in the lower abdomen. The abdominal pain was exacerbated by large meals, and the patient noticed a 10 pound weight loss.

She had an ultrasound of the abdomen which showed a mass in the pancreas. An abdominal CT was obtained which revealed a 7.4 X 4.5cm mass in the body of the pancreas with encasement of the celiac vessels, as well as a 1.4cm lesion in the posterior right dome of the liver.

An ultrasound-guided biopsy revealed a grade 4 adenocarcinoma, which was unresectable.

During the week before visiting our Pain Clinic the patient was having significant abdominal and back pain. She described this pain as a dull pain that started in the back and radiated to the lower quadrants of the abdomen. It was worse after meals. This pain was rated 6 out of 10 (0 being no pain and 10 the worst pain ever experienced). The patient was having trouble sleeping due to pain and was using Tylenol # 3, one tablet four times a day. This regimen provided her with modest pain relief.

The patient was evaluated at our Pain Clinic and a neurolytic celiac plexus block was offered. Because of the history of severe scoliosis, which was obvious on physical examination of her back, we decided to take some fluoroscopic pictures of her back to better assess the procedural options and risks (Figures 1 and 2).

Given difficult spinal anatomy, a 2-needle posterior approach to the celiac plexus was considered technically challenging, and perhaps associated with a risk of pneumothorax.

Based on these findings we considered 2 options: 1) a single needle transaortic celiac plexus block, approaching from the left side; 2) an endoscopic ultrasound-guided transgastric celiac plexus block.

The patient and her family chose to proceed with the endoscopic procedure.

The next day, under IV sedation, an endoscope was advanced into the stomach. Using ultrasound and doppler, the aorta (AO) and celiac artery (CA) were visualized. A 21g needle was advanced through the side port of the endoscope and placed just above the origin of the celiac artery. (Figure 3)

Correct placement was verified by injecting 10cc of normal saline. We then proceeded to inject 20ml of 0.25% bupivacaine. After 5 minutes, 20ml of 98% anhydrous ethanol was injected.

There were no acute complications, the patient was observed for 45 minutes in the recovery area. The patient was discharged after a short observation period, rating her pain 0 out of 10.

Transdermal analgesia was started the following day using fentanyl patches 25mcg/hr and replaced every 72 hours.

On follow up, two weeks later, the patient reported the pain to be 2 out of 10. The fentanyl patch was increased to 50mcg/hr. She was told to use Tylenol #3 1-2 tablets every 4-6 hours PRN.

Four weeks after the procedure, the patient rated her pain 1 out of 10 and was using only 0 to 2 Tylenol #3 for breakthrough pain. She and her family were very pleased with the pain management.

Discussion:

Celiac plexus blocks have been used for many years to manage abdominal pain of different etiologies. The classic posterolateral approach with fluoroscopic or palpatory guidance was popularized by Moore (1) and is still widely used. Several different techniques have emerged and include the anterior approach under CT or ultrasound guidance, and lately the endoscopic transgastric approach as reported by Wiersema (2).

A study by Polati et al. (3) showed that neurolytic celiac plexus blocks are associated with a reduction in analgesic consumption and drug-related adverse effects in patients with pancreatic cancer. Gress et al. (4) concluded that endoscopic ultrasound-guided celiac plexus blocks provided more persistent pain relief than CT-guided blocks in patients with pain secondary to chronic pancreatitis.

At our institution both the classic posterior approach as well as the endoscopic transgastric approach are performed. It is our belief that the endoscopic route is a good alternative for patients with challenging spinal anatomy.

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3. Polati, E, et al. Prospective randomized double-blind trial of neurolytic coeliac plexus block in patients with pancreatic cancer. *The British Journal of Surgery*, 85(2):199-201, 1998 Feb.

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