

Chronic Abdominal Pain in a Pediatric Patient After Resolution of Acute Pancreatitis: A Case Report

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Acute Pancreatitis

- Incidence of acute pancreatitis is increasing in the United States.

Pain Etiology and Course

- Focal epigastric and diffuse abdominal pain
- Stimulation of visceral pancreatic and somatic peritoneal pain receptors.
- Pain transmitters including tachykinin substance P, calcitonin-gene-related peptide.
- Pain resolution in 30-60 days

Chronic Abdominal Pain

- 0.3-19% prevalence in Western society
- 90% of cases no organic cause is found
- Diagnostic workups for functional abdominal pain cost \$6000 per child

Functional Outcomes

- Children with functional abdominal pain report lower quality of life scores, have a high rate of school absence.

A Case Report

• A 13-year-old male with right periumbilical atraumatic abdominal pain started 11/16/2017 without an inciting event, associated with headache and dizziness. He was evaluated and diagnosed with acute pancreatitis with elevated enzymes and persistent emesis for one month. He was evaluated and treated but continued to have persistent pain.

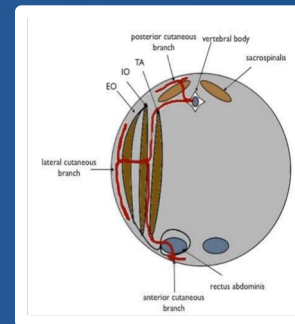
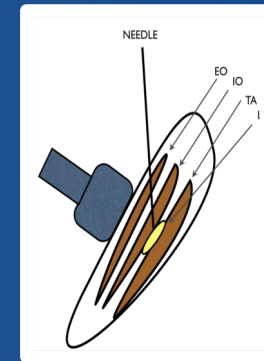
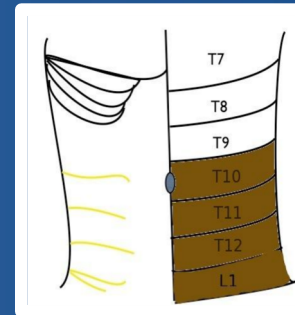
• His pain, characterized as 8-9/10 at worst, 6/10 on average, 4-5/10 at best, and never 0/10, sharp without radiation, and located in the periumbilical region, persisted post hospitalization. Distraction helped the pain, but it was not relieved by ice, heat, rest, lying, standing, sitting, and medical management.

• On 11/29/16 the hospital readmitted him for intractable pain and poor oral intake with a working diagnosis of functional abdominal pain as his pancreatic enzymes were within normal limits. A full diagnostic workup, including colonoscopy, was negative. He was discharged on 12/24/17 with nasogastric tube feeds, mirtzapine, and omeprazole and referred to a multidisciplinary pediatric pain clinic.

• On presentation to pain clinic he continued to have right periumbilical tenderness with voluntary guarding that did not remit with distraction. Carnett's sign was positive. We recommended a multidisciplinary approach including local anesthetic blocks for somatic pain component, cognitive behavioral therapy (CBT), and feeding clinic.

• The patient underwent bilateral transverse abdominis plane (TAP) blocks with 27G 1.5 inch regular needle on 2/7/2017. Ten milliliters of 0.2% ropivacaine and 30 mcg clonidine between internal oblique and transversus abdominal muscle. Trigger point injection was performed at max pain and injection of 2 milliliters of solution. After this procedure his pain improved 50%. Pain was at best 3/10 and worst 8/10 (episodic). The patient and family noticed increased function. He remained on the gabapentin 1200 mg/day as his pain increased during the wean. On 3/21/2017 the patient underwent TAP block with bupivacaine 0.2% and 4mg of dexamethasone instead of clonidine. After injection his pain improved to 1/10 and worst 3/10.

TAP Block



- Fluid is injected in the neurovascular plane at the lumbar triangle of Petit, anesthetizing the anterior rami of nerves T10-L1.
- Blocks somatic pain perception from the intercostal spaces as well as the abdominal wall.

CBT and Feeding Clinic

- Patient participated in several cognitive behavioral therapy sessions to develop pain coping skills.
- Feeding clinic focused on food aversion and portion size.

Mechanism of Relief

- His temporal yet short-term relief after bilateral tap blocks was indicative of a somatic pain etiology.
- Trigger point relief

Lessons Learned

- Patients presenting with chronic pain deserve a multidisciplinary approach.
- Involving pediatric pain teams earlier in workup may prevent need for expensive tests.

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