Introduction:
Chronic pancreatitis while uncommon in children is a devastating disease. It has been defined as irreversible inflammation, ductal alteration, fibrosis and exocrine atrophy. The primary symptom of chronic pancreatitis is extreme intractable pain. One treatment for this disorder has been a total pancreatectomy and islet autotransplantation (TPIAT). This is performed through a midline supra-umbilical incision. A major difficulty in caring for these patients post-operatively is their pain management. This is because they usually present with an opioid tolerance and or opioid induced hyperalgesia due to chronic narcotic use from chronic pain. One adjunct to pain control for these patients has been the placement of bilateral ultrasound guided paravertebral catheters at T8-9 level.

Methods: This was a retrospective cohort study of 30 pediatric patients who underwent TPIAT for chronic pancreatitis. The first 15 patients postoperative pain control consisted of IV narcotic PCA, a dexmedetomidine infusion, and intermittent IV ketamine. The next 15 patients had the same IV pain control medications with the addition of ultrasound guided bilateral T8-9 paravertebral catheters placed after induction but prior to incision. The catheters remained in place for 7 days postoperatively and during that time an infusion of 0.2% ropivacaine was infused at a rate of 0.2-0.25 ml/kg/hour. Medical records were reviewed to obtain postoperative opioid use both total and percent above preoperative use, time to first ambulation, presence of nausea and vomiting, and VAS pain score.

Results:
There was a significant decrease in VAS pain score and percent opioid use above preoperative use when comparing those who received the paravertebral catheters to those who did not. There was no difference in time to first ambulation and presence of nausea and vomiting between the two groups.

Conclusions:
Bilateral ultrasound guided thoracic paravertebral catheters are an effective adjunct to postoperative pain control for the TPIAT procedure.

Reference: