

Robotics (con't.)

THE NUSS PROCEDURE: EXPERIENCE FROM THE FIRST FIFTY

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Purpose: The Nuss procedure has gained rapid acceptance among pediatric surgeons. We present the results from our initial 50 patients undergoing the minimally invasive pectus repair.

Methods: A retrospective review of patients undergoing the Nuss procedure from April 1998 to the present was performed. Data including age, operative time, length of hospital stay, and complications were recorded.

Results: Fifty patients underwent the Nuss procedure. Average age was 13 years. Average operative time was 92 minutes. Average length of stay was 6 days. Eleven post-operative pneumothoraces occurred, none requiring a thoracostomy tube. One displaced bar was replaced at one month. A second displaced bar was removed at 15 months. Infection necessitated one bar removal at 11 months. Three bar stabilizers, one broken, one bent, and one displaced, were replaced. Upon bar removal, two bar stabilizers were broken. A rib wire has replaced bar stabilizers. One internal mammary artery injured occurred. Eighteen bars have been removed. All but one patient with a tilted sternum had excellent satisfaction.

Conclusions: The Nuss procedure offers decreased operative times, minimal blood loss, and improved cosmesis when compared with the open approach. Patient satisfaction has been excellent. Unique complications include an infected bar, broken bar stabilizers, and an internal mammary artery injury. Initial results demonstrate the Nuss procedure is an effective method for a pectus excavatum repair.

Spleen/Solid organ

LAPAROSCOPIC PARTIAL SPLENECTOMY FOR AN HEMANGIOMA OF THE SPLEEN

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Aim Present the first case report of a successful laparoscopic segmentary splenectomy for a spleen neoplasm in pediatrics.

Introduction Splenic hemangioma is a rare disorder but remains the most common benign neoplasm of the spleen. It often has a latent clinical picture but spontaneous rupture may occur. Diagnosis is most often made after histologic findings of a resected solid spleen tumor. Treatment most often consists in splenectomy. Laparoscopic preservation of spleen has been previously reported for the treatment of cysts and traumatic lesions.

We present a child with a solid spleen tumor treated with a laparoscopic partial splenectomy with a postoperative diagnosis of capilar hemangioma.

Case Presentation A 2 years old male presented with recurrent abdominal pain. Ultrasonography and CT showed a 4.05 × 3.63 cm hypocogenic mass involving the spleen pedicle. A laparoscopic approach in the prone position with a slight left side elevation showed a solid tumor in the lower pole of the spleen involving the splenic main vessels.

We used 4 ports: an umbilical 10mm one for the lens; one left lower quadrant 5 mm for the surgeon right hand; one epigastric 5mm for retraction and suction and one 5mm in the midline between the umbilicus and the epigastric port for the surgeon left hand. The bipolar vessel sealing system was used successfully as the primary method for vessel occlusion. Approaching the upper border of the tumor, we found a splenic upper pole vascular pedicle which was preserved. Transection of the splenic tissue was completed using monopolar hook and the bipolar vessel-sealing device, following signs of ischemia on the surface of the spleen. Spleen upper ligaments were left on site to prevent a wandering residual spleen. The resected spleen was extracted in a bag through a small Pfannenstiel incision.

Results Operative time was 75 min. Hospital stay was 2 days. Histologic exam showed a capilar hemangioma. Doppler US is positive after 2 months of follow up.

Discussion This is the second splenic solid tumor treated by laparoscopy in our institution and the first successfully resected preserving splenic tissue. The type of vascular supply and the use of the bipolar system device made a safe and bloodless segmentary splenectomy possible.

LAPAROSCOPIC SPLENOPEXY FOR THE WANDERING SPLEEN SYNDROME

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Purpose: Wandering spleen is an uncommon condition characterized by the absence of the normal suspensory ligaments of the spleen. The spleen is highly mobile, suspended only by its vascular pedicle, and prone to significant complications including torsion, pancreatitis, intestinal obstruction, and bleeding from gastric varices. Splenectomy has been the traditional method of treatment, however, splenopexy has recently been advised to avoid the risk of postsplenectomy sepsis. We present a novel minimally invasive method of splenopexy for the wandering spleen.

Methods: A 15 year old female presented with a 3 week history of intermittent severe lower abdominal pain and was found to have a palpable mass and thrombocytopenia. Ultrasonography demonstrated an enlarged wandering spleen and cholelithiasis. Laparoscopic splenopexy and cholecystectomy were performed using five 5mm ports and one 10mm port. An absorbable polyglycolic acid mesh was used to secure the spleen in a circumferential manner to the diaphragmatic surface of the left upper quadrant.

Results: The patient had an uneventful perioperative course and was discharged home on post-operative day 1 tolerating a regular diet. The minimally invasive procedure was performed safely and without complications.

Conclusion: Laparoscopic splenopexy with splenic salvage is a safe method of treatment for the wandering spleen.