MIS for Children Cancer

Minimal invasive surgical (MIS) procedures through the use of laparoscopy and thoracoscopy have evolved slowly in the actual management of children with solid abdominal tumors and cancer in other sites of the body. The main indication is biopsy or simply determination of resectability of large abdominal tumors not amenable to immediate surgical therapy, along with thoracoscopic biopsy of lung metastasis. Adequate tissue with minimal surgical trauma can be obtained in most of these children. In the case of neuroblastoma, thoracoscopy has been also useful in resection of residual tumors and primary tumors of the posterior mediastinum. The efficacy of laparoscopic adrenalectomy for metastatic lesions, benign tumors, and small to medium neuroblastomas (two to 4 cm in diameter) is well established. Trocar site metastasis can be averted by retrieving the specimen within an endobag. Ovarian tumors are amenable to laparoscopic resection following strict protocol observation and managing of tissue extraction. The length of hospital stay, time to start postoperative feeding, time to start postoperative chemotherapy and postop discomfort (postoperative pain, analgesics requirement, postoperative ileus) is significantly shorter in the group of patients who undergoes MIS procedures. Role of MIS in Wilms tumor, rhabdomyosarcoma and hepatoblastoma is limited to biopsy and staging. MIS can be used safely and successfully to diagnose children with suspicious solid neoplasms.

References:

Splenic Trauma: Embolization

The spleen is the most commonly injured visceral organ in blunt abdominal trauma in both adults and children. Most children with splenic trauma are managed conservatively
and the need for surgical intervention is very rarely utilized. When the need for surgery arises splenic perservation is tried by all means. For such purpose various suture techniques, biomaterials and resorbable protheses are utilized. Splenic artery embolization (SAE) is another useful technique in the management of blunt splenic injury. SAE is performed when patients has the following CT angiographic criteria: (1) extravasation of contrast material extending beyond or within the splenic parenchyma, (2) arterial disruption or major arteriovenous fistula, or both. Major complications occurs in 25% of the SAE-treated patients and included total splenic infarction, splenic atrophy, and postprocedure bleeding. Minor complications are more common and included fever, pleural effusion, and partial splenic infarction. Proximal splenic artery embolization in children may be a safe therapeutic alternative to either conservative or surgical management in spontaneous splenic rupture and even after delayed rupture. Preservation of splenic tissue with a reduced risk of repeated hemorrhage can be obtained with proximal splenic artery embolization. Splenic salvage rate goes beyond the 90% in reported series.

References:

Artificial Anal Sphincter

Fecal incontinence is a devastating social and psychological problem in children and adults. Several methods to manage this condition includes biofeedback, bowel mechanical cleansing training, dynamic graciloplasty, permanent stoma, sacral neuromodulation and implantation of an artificial anal sphincter (AAS). The success rate of AAS is approximately 75%. The artificial anal sphincter restores continence to solid stools in almost all severely incontinent patients, two-thirds of whom achieve practically normal continence. Infection has been the most serious complication, but a number of technical complications (cuff broken, rectal erosion, difficulty in evacuating) related to the device have also occurred and required revisional procedures in up to 60% of the patients. The late complications (infection and skin erosion) are the main cause of device explantation. Although morbidity and the need for revisional surgery are high, after artificial sphincter implantation anal incontinence and quality of life improve significantly. Recently, a novel artificial anal sphincter system with sensor feedback
based on transcutaneous energy transmission was developed.

References: