



PEDIATRIC SURGERY *Update* ©

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Ambulatory Laparoscopy

With the massive use of minimal invasive surgical procedures in children the next step in research design is deriving which procedure can be conveniently do on an ambulatory basis (meaning leaving the hospital a few hours after surgery), and which needs overnight hospitalization. Non-randomized studies in children have proved a safe benefit and low costs in performing diagnostic laparoscopy for non-palpable undescended testis, intersexual problems and contralateral inguinal hernia. Likewise, therapeutical laparoscopic procedures done ambulatory include cholecystectomy, interval and simple appendectomy, ovarian, omental and hepatic cysts, placement of dialysis catheter and PEG assisted procedures. Contraindication for ambulatory laparoscopy in children includes prematurity, cardio-respiratory and neurologic (cerebral palsy) conditions, labile coagulopathy, long distance from medical care facilities, procedures longer than two hours and poor social/educated conditions. Postoperative pain control is the Achilles tendon of ambulatory surgery. Several elements associated with reduced postoperative pain includes: use of low carbon dioxide intra abdominal pressure, low insufflation rate, local anesthesia infiltration at the start of the operation, warming carbon dioxide, use of humidified gas at body temperature, evacuate all intraperitoneal gas and a short laparoscopic procedure. After surgery narcotic analgesia is needed. During and after the laparoscopic procedure any child who has significant oozing, conversion to open, excessive adhesions, vomiting, or pain should stay overnight for clinical observation.

References:

- 1- Llorente J: Laparoscopic cholecystectomy in the ambulatory surgery setting. J Laparoendosc Surg 2(1):23-6, 1992
- 2- Sanfilippo JS, Lobe TE: Laparoscopic surgery in girls and female adolescents. Semin Pediatr Surg 7(1):62-72, 1998
- 3- Lobe TE: Laparoscopic surgery in children. Curr Probl Surg 35(10):859-948, 1998
- 4- Campanelli G, Cavagnoli R, Cioffi U, De Simone M, Fabbiani M, Pietri P: Can laparoscopic cholecystectomy be a day surgery procedure? Hepatogastroenterology 45(23):1422-9, 1998
- 5- Smith M 2nd, Wheeler W, Ulmer MB: Comparison of outpatient laparoscopic cholecystectomy in a private nonteaching hospital versus a private teaching community hospital. JSLS 1(1):51-3, 1997
- 6- Mouton WG, Bessell JR, Otten KT, Maddern GJ: Pain after laparoscopy. Surg Endosc 13: 445-448, 1999
- 7- Arnbjornsson E, Larsson LT, Lindhagen: Complications of laparoscopy-aided gastrostomies in pediatric practice. J Pediatr Surg 34(12):1843-6, 1999

Neurilemmomas

Neurilemmomas, also known as Schwannomas, are peripheral nerve tumors originating from neuronal sheath cells (Schwann cells). Most neurilemmomas occur later in life,

generally after the age of forty years. Most neurilemmomas are benign tumors. The few malignant cases are characterized by rapid tumor growth. Clinical picture depends on the anatomic site and size of origin. Have been reported to occur anywhere in the body with most cases originating in the head and neck region. Neurilemmomas in the cervical region arise from the cranial nerves with the vagus nerve or its branches being the most commonly affected. Other site for neurilemmomas reported in children includes the brachial plexus, cervical nerve roots, cervical sympathetic chain and small peripheral nerves of the hand. Bilateral vestibular schwannomas are associated with Neurofibromatosis type II. Imaging studies (US and CT-Scan) shows a solid encapsulated tumor. Delay in diagnosis and treatment is very common due to the slow growing nature of the tumor. Management consists of surgical removal whenever vital structures permit. Malignant variants receive chemo and radiotherapy.

References:

- 1- Rice DH, Coulthard SW: Neurogenic tumors of the head and neck in children. *Ann Plast Surg* 2(5):441-4, 1979
- 2- Ahmed A, Morley A, Wilson JA: Extracranial neurilemmoma: a case report and review of the literature. *J R Coll Surg Edinb* 45(3):192-4, 2000
- 3- Oguzkurt P, Kayaselcuk F, Arda IS, Barutcu O, Tuncer I, Oz S: Anterior abdominal wall malignant peripheral nerve sheath tumor in an infant. *J Pediatr Surg* 36(12):1866-8, 2001
- 4- Nunes F, MacCollin M: Neurofibromatosis 2 in the pediatric population. *J Child Neurol* 18(10):718-24, 2003
- 5- Baglaj M, Markowska-Woyciechowska A, Sawicz-Birkowska K, Dorobisz U: Primary neurilemmoma of the thyroid gland in a 12-year-old girl. *J Pediatr Surg* 39(9):1418-20, 2004

Felon

A felon is defined as a painful fusiform abscess (swelling) in the distal fat pad of the phalanx with increased tenderness over the flexor aspect and erythema (redness and cellulitis) distributed uniformly along the entire flexor aspect of the pulp space. Felon is very different from a paronychia. Paronychia is a more localized painful swelling on the extensor aspect of the distal digit located at the proximal extent of the sulcus. Initial management consists of antibiotics, warm soaks and elevation of the affected extremity. If the child does not improve rapidly with medical treatment, surgical incision and drainage are indicated to avoid involvement of the bony distal phalanx due to rapid extension of the infections process through synovial-lined spaces. Felons are managed with digital anesthetic block and incision along the ulnar aspect of the digit to produce drainage of the closed space infection. The incision is made along the ulnar aspect of the phalanx to avoid the possibility of a painful scar on the radial side of the phalanx which is the pinching side of the distal phalanx. Cultures are routinely taken during surgery. *Staphylococcus aureus* is a common offending organism. Penrose drain for 48 hours is recommended.

References:

- 1- Kilgore ES Jr, Brown LG, Newmeyer WL, Graham WP 3rd, Davis TS: Treatment of felons. *Am J Surg* 130(2):194-8, 1975
- 2- Lewis RC Jr.: Infections of the hand. *Emerg Med Clin North Am* 3(2):263-74, 1985
- 3- Shmerling RH: Finger pain. *Prim Care* 15(4):751-66, 1988

- 4- Connolly B, Johnstone F, Gerlinger T, Puttler E: Methicillin-resistant Staphylococcus aureus in a finger felon.
J Hand Surg 25(1):173-5, 2000
5- Clark DC: Common acute hand infections. Am Fam Physician 68(11):2167-76, 2003
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