



# **PEDIATRIC SURGERY Update** © **Vol. 28 No. 05 MAY 2007**

## **Portal Hypertension**

Portal hypertension (PH) in children is caused by increased portal venous flow from such conditions as hemangiomas or hepatic arterioportal fistulas, or by increase resistance to flow from conditions such as portal vein thrombosis, liver cirrhosis, congenital fibrosis, biliary atresia, neonatal hepatitis or hepatic vein thrombosis. In children, extrahepatic obstruction due to portal vein thrombosis is the most common cause. Most common presentation of PH is upper gastrointestinal bleeding from esophageal or gastric varices, followed by splenomegaly with hypersplenism. Diagnostic studies include liver function tests, upper endoscopy, color Doppler US, splenoportography and MRI. Initial management of PH can entail the use of vasoactive beta blockers such as propranolol or somatostatin. Bleeding varices can be managed with banding or sclerotherapy. Children with favorable liver function, but unfavorable anatomy and continuous variceal bleeding can benefit from a devascularization procedure. Those with unfavorable liver function and bleeding can benefit from transjugular intrahepatic portosystemic shunt (TIPS), though shunt thrombosis is a problem the smaller the kid. Children with favorable anatomy can benefit from a distal splenorenal (or splenoadrenal) shunt, or a makeshift shunt such as the Rex shunt between the inferior mesenteric vein and a branch of the portal vein high in the hepatic hilum using autologous vein graft. Liver transplantation is the treatment of choice for children with PH complicating end-stage liver cirrhosis.

### **References:**

- 1- Karrer FM: Portal hypertension. *Semin Pediatr Surg.* 1(2):134-44, 1992
- 2- Maksoud JG, Goncalves ME: Treatment of portal hypertension in children. *World J Surg.* 18(2):251-8, 1994
- 3- Karrer FM, Narkewicz MR: Esophageal varices: current management in children. *Semin Pediatr Surg.* 8(4):193-201, 1999
- 4- Ryckman FC, Alonso MH: Causes and management of portal hypertension in the pediatric population. *Clin Liver Dis.* 5(3):789-818, 2001
- 5- Ling SC: Should children with esophageal varices receive beta-blockers for the primary prevention of variceal hemorrhage? *Can J Gastroenterol.* 19(11):661-6, 2005
- 6- Schettino GC, Fagundes ED, Roquete ML, Ferreira AR, Penna FJ: Portal vein thrombosis in children and adolescents. *J Pediatr (Rio J).* 82(3):171-8, 2006

## **Breast Papilloma**

Breast juvenile papilloma in children is a rare benign lesion featuring atypical papillary duct hyperplasia and numerous cysts. They manifest clinically as a localized, multinodular mass that is usually interpreted as a juvenile fibroadenoma. Most cases occur in females, though some cases in males have been reported. Mean age of diagnosis occurs during the late adolescent years. Left breast is affected slightly more often than the right. Patterns of

menarche, marital history, parity, and use of birth control pills are not exceptional for women in this age group. No instance is found of maternal use of estrogens during pregnancy. Family history of breast carcinoma is seen in one-third of all cases of papillomatosis. Juvenile secretory carcinoma can be associated with papillomatosis. Breast ultrasonography will show an ill-defined, inhomogeneous mass with numerous small, hypoechoic areas, but cannot differentiate a fibroadenoma from papilloma. Excisional biopsy through a periareolar incision will establish the diagnosis. Should a secretory carcinoma be found wide local excision is warranted. Due to the precancerous nature of papillomatosis, long-term yearly follow-up is recommended.

#### **References:**

- 1- Rosen PP, Holmes G, Lesser ML, Kinne DW, Beattie EJ: Juvenile papillomatosis and breast carcinoma. *Cancer*. 55(6):1345-52, 1985
- 2- Ferguson TB Jr, McCarty KS Jr, Filston HC: Juvenile secretory carcinoma and juvenile papillomatosis: diagnosis and treatment. *J Pediatr Surg*. 22(7):637-9, 1987
- 3- Batchelor JS, Farah G, Fisher C: Multiple breast papillomas in adolescence. *J Surg Oncol*. 54(1):64-6, 1993
- 4- Rice HE, Acosta A, Brown RL, Gutierrez C, Alashari M, Mintequi D, Rodriguez A, Chavarra O, Azizkhan RG: Juvenile papillomatosis of the breast in male infants: two case reports. *Pediatr Surg Int*. 16(1-2):104-6, 2000
- 5- Ohlinger R, Schwesinger G, Schimming A, Kohler G, Frese H: Juvenile papillomatosis (JP) of the female breast (Swiss Cheese Disease) -- role of breast ultrasonography. *Ultraschall Med*. 26(1):42-5, 2005
- 6- Sonmez K, Turkyilmaz Z, Karabulut R, Demirogullari B, Ozen IO, Moralioglu S, Basaklar AC, Kale N: Surgical breast lesions in adolescent patients and a review of the literature. *Acta Chir Belg*. 106(4):400-4, 2006

## **Pelvic Inflammatory Disease**

Acute pelvic inflammatory disease (PID) is a major gynecologic health problem in the USA, afflicting more than 1 million women each year. PID continues to be a common diagnosis among adolescent girls presenting with low abdominal pain. Adolescents have a higher rate of diagnosis of PID than any other age group. PID is an ascending polymicrobial infection affecting the upper genital tract. Risk factors associated to PID include young age, age at first intercourse, multiple sex partners, the presence of bacterial vaginosis, vaginal douching, the use of an intrauterine contraceptive device, and a history of a sexually transmitted disease. Classic symptoms of pain, fever, and a history of high-risk sexual behavior, is easily diagnosed with a high degree of specificity in PID. Unfortunate, most females with PID demonstrate atypical symptoms which sometimes mimic appendicitis discovering the disease during the appendectomy. Abnormal vaginal discharge full of neutrophils is an indicator of PID, along with a positive vaginal culture for Chlamydia or Gonorrhea. Management of PID entails the use of broad-spectrum antibiotics, which represent the cornerstone of therapy and must adequately cover the polymicrobial spectrum of pathogens implicated in this infection, which includes *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and specific cervicovaginal anaerobic and aerobic bacteria. Sequelae associated with PID includes infertility, ectopic pregnancy, and chronic pelvic pain syndromes. The sexual partner of the affected patient should also be treated.

**References:**

- 1- Soper DE: Surgical considerations in the diagnosis and treatment of pelvic inflammatory disease. Surg Clin North Am. 71(5):947-62, 1991
- 2- Quan M: Pelvic inflammatory disease: diagnosis and management. J Am Board Fam Pract. 7(2):110-23, 1994
- 3- Blythe MJ: Pelvic inflammatory disease in the adolescent population. Semin Pediatr Surg. 7(1):43-51, 1998
- 4- Patel DR: Management of pelvic inflammatory disease in adolescents. Indian J Pediatr. 71(9):845-7, 2004
- 5- Banikarim C, Chacko MR: Pelvic inflammatory disease in adolescents. Semin Pediatr Infect Dis. 16(3):175-80, 2005
- 6- Song AH, Advincula AP: Adolescent chronic pelvic pain. J Pediatr Adolesc Gynecol. 18(6):371-7, 2005

---

\* Edited by: **Humberto Lugo-Vicente, MD, FACS, FAAP**

Professor /Academic Director of Pediatric Surgery, University of Puerto Rico - School of Medicine,  
Rio Piedras, Puerto Rico.

Address: P.O. Box 10426, Caparra Heights Station, San Juan, Puerto Rico USA 00922-0426.

Tel (787)-786-3495 Fax (787)-720-6103 E-mail: [titolugo@coqui.net](mailto:titolugo@coqui.net)

Internet: <http://home.coqui.net/titolugo>

©PSU 1993-2007  
ISSN 1089-7739