



Hemobilia

Hemobilia is defined as bleeding into the biliary tract due to a communication between a blood vessel and the bile ducts. Hepatic trauma (iatrogenic and accidental) is the most frequent cause of hemobilia, but it can also occur after inflammation, hepatobiliary tumors, percutaneous liver biopsy and vascular disorders. The proximity of the intrahepatic bile ducts and the hepatic vascular supply accounts for the occasional development of an arteriobiliary or portobiliary fistula and hemobilia. Hemobilia may be major and present with life-threatening hemorrhage or minor and present many weeks after the initial injury. The classic Sandblom triad of jaundice, epigastric pain and upper GI bleeding occurs in one-third of all patients. Arterial bleeding may be so rapid that blood is easily dissolved in bile passing directly into the duodenum appearing as either hematemesis or melena. With slow hemorrhage the blood and bile do not mix and clots obstruct the bile ducts producing colicky abdominal pain and jaundice. Upper GI endoscopy rules out a bleeding source in the esophagus, stomach or duodenum and can detect bleeding from the ampulla of Vater. Other diagnostic studies performed include US or CT-Scan. Hepatic arteriography is the diagnostic and therapeutic modality of choice. Findings at arteriography are usually a pseudoaneurysm. Significant hemobilia seldom ceases spontaneously and usually necessitates surgical or angiographic intervention. Surgical management includes liver suturing or partial hepatic resection for peripheral lesions and ligation of the hepatic artery for more central lesions. Transcatheter selective arterial embolization with microcoils is currently the safest and preferred technique used to manage hemobilia. It is minimally invasive and can be combined with diagnostic arteriography. The risk of hepatic necrosis is minimal with superselective embolization. The complication rate after embolization is low due to its dual vascular supply with the portal vein and hepatic artery except in cases in which the portal vein is thrombosed.

References:

- 1- Laopaiboon V, Aphinives C, Pongsuwan P, Pugkem A, Thammaroj J, Puttharuk W: Hepatic artery embolization to control liver hemorrhages by interventional radiologists: experiences from Khon Kaen University. *J Med Assoc Thai.* 89(3):384-9, 2006
- 2- Srivastava DN, Sharma S, Pal S, Thulkar S, Seith A, Bandhu S, Pande GK, Sahni P: Transcatheter arterial embolization in the management of hemobilia. *Abdom Imaging.* 31(4):439-48, 2006
- 3- Gupta LB, Puri AS: Management of traumatic hemobilia with embolization. *Indian Pediatr.* 43(9):825-7, 2006
- 4- Villarreal DH, Norwood S, McAuley C, Berne JD: Hemobilia and subsequent hemocholecystitis complicating blunt hepatic injury. *J Trauma.* 62(6):E18-9, 2007
- 5- Marynissen T(1), Maleux G, Heye S, Vaninbrouckx J, Laleman W, Cassiman D, Verslype C, Van der Merwe S, Van Steenberghe W, Nevens F: Transcatheter arterial embolization for iatrogenic hemobilia is a safe and effective procedure: case series and review of the literature. *Eur J Gastroenterol Hepatol.*

24(8):905-9, 2012

6- Zaleska-Dorobisz U, Lasecki M, Olchowy C, Ugorski W, Garcarek J, Patkowski D, Kurcz J: Iatrogenic hemobilia in 10-year-old boy. *Pol J Radiol.* 79:279-82, 2014

Pseudogynecomastia

Gynecomastia in pubertal boys is a very distressing condition. Development of glandular tissue (ductal hyperplasia) underneath the areola is thought to occur from an imbalance of free testosterone and estrogen as opposed to the hormone bound to sex hormone binding globulin. Certain medications compete with estrogen binding more than testosterone bindings causing free estrogen to be higher thus stimulating glandular growth in pubertal males. Drugs implicated in breast enlargement include spironolactone, marijuana, amphetamines, anabolic steroids, digoxin, Valium, metronidazole, omeprazole, ranitidine, and metoclopramide. Clinical manifestations consist of soft, elastic, nodule-like retroareolar mass that is occasionally associated with pain. Endocrine evaluation of these patients is usually negative and there is no need for ultrasound or imaging studies to diagnose gynecomastia. Pseudogynecomastia is a form of bilateral breast enlargement which occurs from excess chest fat in obese children. It is clinically manifested by increases in volume that are diffuse, non-nodular and symmetrical. The diagnosis is made on clinical findings. Ultrasound reveals the presence of lobular areas of adipose tissue that are homogeneously hypoechogenic and separated from one another by thin hyperechoic bands of fibrous tissue. Initial management of pseudogynecomastia is reassurance and weight reduction. With persistent distress excisional surgery for both pseudogynecomastia and gynecomastia with or without added liposuction for contouring of the chest and upper abdomen ensures flat chests and no partial return of breast enlargement.

References:

- 1- Gusenoff JA, Coon D, Rubin JP: Pseudogynecomastia after massive weight loss: detectability of technique, patient satisfaction, and classification. *Plast Reconstr Surg.* 122(5):1301-11, 2008
- 2- Castillo PF, Sepulveda C, Troncoso AL, Villaman JJ, Cuadra A: Transumbilical approach for pseudogynecomastia liposuction. *Aesthetic Plast Surg.* 33(6):832-3, 2009
- 3- Johnson RE, Murad MH: Gynecomastia: pathophysiology, evaluation, and management. *Mayo Clin Proc.* 84(11):1010-5, 2009
- 4- Venkata Ratnam B: How important is "pseudogynecomastia"? *Aesthetic Plast Surg.* 35(4):668-9, 2011
- 5- Draghi F, Tarantino CC, Madonia L, Ferrozzi G: Ultrasonography of the male breast. *J Ultrasound.* 14(3):122-9, 2011
- 6- Senger JL, Chandran G, Kanthan R: Is routine pathological evaluation of tissue from gynecomastia necessary? A 15-year retrospective pathological and literature review. *Can J Plast Surg.* 22(2):112-6, 2014

Anorectal Manometry

Anorectal manometry (ARM) is used to investigate children with chronic constipation, fecal incontinence, as a tool to evaluate continent results after surgery and determine if the child is a candidate for biofeedback therapy. ARM is a noninvasive procedure that explains the mechanisms of defecation disorders because of hypertonia, low tone or paradoxical shrinkage of the internal anal sphincter. ARM can study the recto-anal

inhibitory reflex (RAIR) which is absent in cases of Hirschsprung's disease. Manometry investigation of anorectum in an awake and compliant child provides valuable information about physiological function including rectal sensations, defecation dynamics and somatic reflexes. Fecal incontinent children will show decrease resting and maximum squeeze pressures along with decrease maximum tolerable rectal volumes and impaired external anal sphincter response to rectal distension. Internal anal sphincter achalasia will show absent RAIR and normal rectal biopsy. Manometric assessment has been the principal method to obtain objective data of postoperative sphincter function by comparing with normative data for each age group. Absence of RAIR in postoperative patients signifies internal anal sphincter damage or maldevelopment. ARM is difficult to perform in children younger than one year of age. With uncooperative children the use of sedation with chloral hydrate, midazolam or ketamine has been proposed. Ketamine anesthesia does not affect quantitative or qualitative measurements of autonomic anorectal function in children who are investigated for chronic functional constipation and soiling. It can be used reliably in children, who are young and uncooperative for awake study and in those who require additional painful procedures. Ketamine can be used in conjunction with endosonography to elucidate evidence of sphincter damage in the context of iatrogenic injuries, sexual abuse and surgery for anorectal malformations and Hirschsprung's disease.

References:

- 1- Senel E, Demirbag S, Tiryaki T, Erdogan D, Cetinkursun S, Cakmak O: Postoperative anorectal manometric evaluation of patients with anorectal malformation. *Pediatr Int.* 49(2):210-4, 2007
- 2- Noviello C, Cobellis G, Papparella A, Amici G, Martino A: Role of anorectal manometry in children with severe constipation. *Colorectal Dis.* 11(5):480-4, 2009
- 3- Kumar S, Al Ramadan S, Gupta V, Helmy S, Debnath P, Alkholly A: Use of anorectal manometry for evaluation of postoperative results of patients with anorectal malformation: a study from Kuwait. *J Pediatr Surg.* 45(9):1843-8, 2010
- 4- Hong J: Clinical applications of gastrointestinal manometry in children. *Pediatr Gastroenterol Hepatol Nutr.* 17(1):23-30, 2014
- 5- Mousavi SA, Karami H, Rajabpoor AA: Intractable chronic constipation in children: outcome after anorectal myectomy. *Afr J Paediatr Surg.* 11(2):147-9, 2014
- 6- Keshtgar AS, Choudhry MS, Kufeji D, Ward HC, Clayden GS: Anorectal manometry with and without ketamine for evaluation of defecation disorders in children. *J Pediatr Surg.* 50(3):438-43, 2015

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