PEDIATRIC SURGERY *Update* ©
Vol. 21 No. 02 AUGUST 2003

Ulcerative Colitis

Ulcerative colitis (UC) is a chronic debilitating inflammatory disease of the bowel affecting primarily the mucosa and to a lesser extent to the adjacent submucosa. UC affects mainly the rectum and colon causing delayed growth and development. In some children the terminal ileum is affected. Cause of UC remains unknown. Peak incidence is between 1.5 and 17 years (mean 11 years). UC originates as an acute inflammation of the crypts (cryptitis) developing tissue reaction of chronicity. More than 90% children with UC have moderate to severe disease. Clinically, the child with UC develops bloody diarrhea, abdominal cramps, anemia, fever, tachycardia, hypoalbuminemia and weight loss. Colonoscopy is diagnostic. Medical management includes restriction of milk protein from diet, parenteral nutrition, steroids, sulfasalazine, metronidazole, 6-mercaptopurine, cyclosporine and tracolimus. UC can be cured by surgical resection of the colon. Indications for surgery in UC include inability to attain growth and development under medical therapy, fulminant disease refractory to medical therapy, extensive rectal bleeding, perforation and toxic megacolon. Surgical management consists of total proctocolectomy and ileal pouch anal anastomosis. The J-pouch is the simplest to construct. Retention of mucosa above the dentate line after surgery produces recurrent inflammatory disease and high risk of developing carcinoma. A low risk of bladder dysfunction and impotence due to damage to pelvic nerves is associated with proctocolectomy. Postop complications are associated with duration of the disease and length/dosage of medication (steroids). Long-term function after surgery is good in more than 90% of children with high patient satisfaction.

References:

1- Ament M, Vargas JH: Medical Therapy for Ulcerative Colitis in Childhood. Semin Pediatr Surg 3(1): 28-32, 1994

2- Fonkalsrud EW: Surgical management of ulcerative colitis in childhood. Semin Pediatr Surg 3(1):33-8, 1994

3- Nicholls S, Vieira MC, Majrowski WH, Shand WS, Savage MO, Walker-Smith JA: Linear growth after colectomy for ulcerative colitis in childhood. J Pediatr Gastroenterol Nutr 21(1):82-6, 1995

4- Rintala RJ, Lindahl H: Restorative proctocolectomy for ulcerative colitis in children--is the J-pouch better than straight pull-through? J Pediatr Surg 31(4):530-3, 1996

5- Hyams JS, Davis P, Grancher K, Lerer T, Justinich CJ, Markowitz J: Clinical outcome of ulcerative colitis in children. J Pediatr 129(1):81-8, 1996

6- Durno C, Sherman P, Harris K, Smith C, Dupuis A, Shandling B, Wesson D, Filler R, Superina R, Griffiths A: Outcome after ileoanal anastomosis in pediatric patients with ulcerative colitis. J Pediatr Gastroenterol Nutr 27(5):501-7,1998

7- Dolgin SE, Shlasko E, Gorfine S, Benkov K, Leleiko N: Restorative proctocolectomy in children with ulcerative colitis utilizing rectal mucosectomy with or without diverting ileostomy. J Pediatr Surg 34(5):837-9, 1999

8- Fonkalsrud EW, Thakur A, Beanes S: Ileoanal pouch procedures in children. Pediatr Surg 36(11):1689-92, 2001
9- Rintala RJ, Lindahl HG: Proctocolectomy and J-pouch ileo-anal anastomosis in children. J Pediatr Surg 37(1):66-70, 2002
10- Mahadevan U, Loftus EV Jr, Tremaine WJ, Pemberton JH, Harmsen WS, Schleck CD, Zinsmeister AR, Sandborn WJ: Azathioprine or 6-mercaptopurine before colectomy for ulcerative colitis is not associated with increased postoperative complications. Inflamm Bowel Dis 8(5):311-6, 2002

Carotid Body Tumor

Chemodectomas (tumors of chemoreceptors cells origin) are called carotid body tumors when they occur in the carotid artery, and glomus tumors if they appear in the jugular vein. Sex distribution for the two major types is equal for males and females. A few cases have been reported in the pediatric age. They are associated with neck swelling and hypertension. Carotid body tumors (CBT) are extra-adrenal paragangliomas diagnosed early in life which can have familial inheritance. Familial cases are of autosomic dominant, bilateral in location and multicentric. Diagnostic work-up includes angiography, CT and MRI. Surgical excision is the treatment of choice for CBT and glomus tumors. Almost three-fourth of CBT and cervical paragangliomas are adherent to or surround adjacent arteries and cranial nerves. Their resection can result in neurovascular injury, stroke and excessive blood loss.

References:

1- Parry DM, Li FP, Strong LC, Carney JA, Schottenfeld D, Reimer RR, Grufferman S: Carotid body tumors in humans: genetics and epidemiology. J Natl Cancer Inst 68(4):573-8, 1982
2- Dickinson PH, Griffin SM, Guy AJ, McNeill IF: Carotid body tumour: 30 years experience. Br J Surg 73(1):14-6, 1986
3- Bishop GB Jr, Urist MM, el Gammal T, Peters GE, Maddox WA: Paragangliomas of the neck. Arch Surg 127(12):1441-5, 1992
4- Varudkar AS, Kokandkar HR, Gumaste GG, Bhople KS, Kumbhakarna NR: Carotid body paraganglioma with coexistent pheochromocytoma in childhood. Indian J Cancer 30(3):109-12, 1993
5- Plukker JT, Brongers EP, Vermey A, Krikke A, van den Dungen JJ: Outcome of surgical treatment for carotid body paraganglioma. Br J Surg 88(10):1382-6, 2001

Perianal Dermatitis

Diaper dermatitis is a group of skin disorders resulting from attack of the skin by physical, chemical, enzymatic, and microbial factors in the diaper environment. Perineal or diaper dermatitis after colo-anal surgical procedures can be a troublesome condition in children. The two most common procedures associated with perianal dermatitis are pull-through for Hirschsprung's disease and to a lesser extent following repair of imperforate anus. The main factors associated with this medical problem are the muscular pseudo incontinence associated with the procedure, frequent bowel movements, postoperative diarrhea and the alkali milieu in contact with the perianal skin. The rash can include mild redness, skin excoriation, pseudo verrucous papules and nodules depending on length of time of skin irritative contact. Histology shows benign epidermal hyperplasia, reactive acanthosis or

psoriasiform spongiotic dermatitis. Managing this condition can be very challenging. This includes water barrier agents, local therapy (A&D, nystatin, zinc oxide), binding agents (cholestyramine) and anti-diarrhea medication. The lesions regress when the irritating factor is removed. A novel approach to reduce the perianal diaper rash associated after closure of colostomy in infants is to paint the perianal skin with the liquid effluent of the colostomy at least two weeks prior to the intended procedure. This permits the perianal skin and proprioception reflex mechanism to adjust to the external skin milieu after closure of a colostomy.

References:

1- Rodriguez Cano L, Garcia-Patos Briones V, Pedragosa Jove R, Castells Rodellas A: Perianal pseudo verrucous papules and nodules after surgery for Hirschsprung disease. J Pediatr 125(6 Pt 1):914-6, 1994
2- Bourrat E, Vaquin C, Prigent F, Rybojad M: Perianal papulonodular dermatitis in Hirschsprung disease. Ann Dermatol Venereol 123(9):549-51, 1996
3- Goldberg NS, Esterly NB, Rothman KF, Fallon JD, Cropley TG, Szaniawski W, Glassman M: Perianal pseudo verrucous papules and nodules in children. Arch Dermatol 128(2):240-2, 1992
4- Hanlon M, Cofone E: Patient with frequent liquid stools resulting in a chemical dermatitis and a perianal ulcer. J Wound Ostomy Continence Nurs 23(3):174-7, 1996
5- Berg RW: Etiology and pathophysiology of diaper dermatitis. Adv Dermatol 3:75-98, 1988

---

* Edited by: **Humberto Lugo-Vicente, MD, FACS, FAAP**
Professor /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*
Internet: http://home.coqui.net/titolugo

ISSN 1089-7739