PEDIATRIC SURGERY *Update* ©

Vol 11 No 03 SEPTEMBER 1998

'Official Publication of the Puerto Rico Association of Pediatric Surgeons'

Laparoscopic Pyloromyotomy

Infantile pyloric stenosis (PS), the most common abdominal surgical condition in infancy, has been traditionally managed with an open myotomy from antrum to short of the pyloro-duodenal border (Fredet-Ramstedt's) since early century with excellent results. In 1991 the suggestion that the procedure could benefit from the video-endosurgical point of view was posed. Since then a few series have retrospectively compared results between both approaches (open and laparoscopic). Major advantage of the laparoscopic technique is in wound cosmesis, a theoretical reduction in the incidence of adhesions and a reduced postoperative wound infection rate. Lap technique is more expensive given the fact on the need of video equipment, training learning curve and operating time. The most dreaded complication is duodenal perforation during the procedure since this changes the morbidity and hospital stay. Difficulties in detecting this complication represent a serious limitation of the lap approach emphasizing the need to inject air through a nasogastric tube to check for leaks. Mucosal perforation is a reason for conversion to the open technique. The number of days spent in the hospital is similar with both techniques. Circumbilical open incisions have similar cosmetic results, but can be associated with problems of tumor delivery, more gastric manipulation (atony) and a higher infection rate.

References

1- Alain JL, Terrier G, Lansade A, Grousseau D, Longis B, Moulies D: [Pyloric stenosis in infants. New surgical approaches]. Ann Pediatr 38(9):630-2, 1991

2- Alain JL, Terrier G, Grousseau D: Extramucosal pyloromyotomy by laparoscopy. Surg Endosc 5(4):174-5, 1991

3- Najmaldin A, Tan HL: Early experience with laparoscopic pyloromyotomy for infantile hypertrophic pyloric stenosis. J Pediatr Surg 30(1):37-8, 1995

4- Scorpio RJ; Hutson JM; Tan HL: Pyloromyotomy: comparison between laparoscopic and open surgical techniques. J Laparoendosc Surg 5(2):81-4, 1995

5- Greason KL, Lo Sasso B, Downey EC, Thompson WR: Laparoscopic pyloromyotomy for infantile hypertrophic pyloric stenosis: report of 11 cases [see comments]. J Pediatr Surg 30(11):1571-4, 1995

6- Ford WD, Holland AJ, Crameri JA: The learning curve for laparoscopic pyloromyotomy. J Pediatr Surg 32(4):552-4, 1997

7- Bufo AJ, Lobe TE, Schropp KP, Cyr N, Shah R; Merry C: Laparoscopic pyloromyotomy: a safer technique. Pediatr Surg Int 13(4):240-2, 1998

8- Tan KC, Bianchi A: Circumbilical incision for pyloromyotomy. Br J Surg 73: 399, 1968

9- Sitsen E, van der Zee DC, Bax NMA: Is laparoscopic pyloromyotomy superior to open surgery? Surg Endosc 12(6):813-5, 1998

Gastroschisis with Intestinal Atresia

Gastroschisis is a congenital evisceration of part of the abdominal content through an anterior abdominal wall defect found to the right of the umbilicus. The protruding gut is foreshortened, matted, thickened and covered with a peel. In a few babies (4 to 23%) an

intestinal atresia (IA) further complicates the pathology. IA complicating gastroschisis may be single or multiple and may involve the small or large bowel. The IA might be the result of pressure on the bowel from the edge of the defect (pinching effect) or an intrauterine vascular accident. Rarely, the orifice may be extremely narrow leading to gangrene or complete midgut atresia. In either case the morbidity and mortality of the child is duplicated with the presence of an IA. Management remains controversial. Alternatives depend on the type of closure of the abdominal defect and the severity of the affected bowel. With primary fascial closure and good-looking bowel primary anastomosis is justified. Placement of a silo calls for delayed resection performing a second look operation at a later stage to save intestinal length. Angry looking dilated bowel prompts for proximal diversion, but the higher the enterostomy the greater the problems of fluid losses, electrolyte imbalances, skin excoriation, sepsis and malnutrition. Closure of the defect and resection with anastomosis two to four weeks later brings good results. Success or failure is related to the length of remaining bowel more than the specific method used.

References

1- Gornall P: Management of intestinal atresia complicating gastroschisis. J Pediatr Surg 24(6):522-4, 1989
2- Shah R, Woolley MM: Gastroschisis and intestinal atresia. J Pediatr Surg 26(7):788-90, 1991
3- Bhatia AM; Crino JP; Musemeche CA: Gastroschisis complicated by midgut atresia and closure of the defect in utero. J Pediatr Surg 31(9):1288-9, 1996
4- Cusick E, Spicer RD, Beck JM: Small-bowel continuity: a crucial factor in determining survival in gastroschisis. Pediatr Surg Int 12(1):34-7, 1997
5- van Hoorn WA, Hazebroek FW, Molenaar JC: Gastroschisis associated with atresia--a plea for delay in resection. Z Kinderchir 40(6):368-70, 1985
6- Hoehner JC, Ein SH, Kim PCW: Management of gastroschisis with Concomitant Jejuno-Ileal Atresia. J Pediatr Surg 33(6): 885-888, 1998

Breast Rhabdomyosarcoma

Breast rhabdomyosarcomas are more commonly metastatic with primary tumors originating in many possible locations (head, neck, orbit, trunk, extremities, buttock, genitourinary system, retroperitoneum, mediastinum, heart, gastrointestinal tract and perianal region). Primary breast location is extremely rare. World review of 26 cases found four of these patients to be younger than age sixteen. There are several reports of breast rhabdo in which a breast mass is the sole presentation of an occult primary tumor. The tumor commonly shows as a palpable, rounded, movable mass with no skin involvement but rapid increase in size. Management must be governed by the principles used for rhabdomyosarcoma that include wide local excision of the primary lesion and multiagent chemotherapy. Few studies report a familial distribution of certain cancers conforming to the Li-Fraumeni syndrome related to a genetic defect on the p53 gene locus.

References

1- Howarth CB, Cases JN, Pratt C: Breast Metastasis in Children with Rhabdomyosarcoma Cancer 46:2520-2524, 1980
2- Reale D, Guanino M, Sgroi G, Castelli F, et al: Primary Embryonal Rhabdomyosarcoma of the Breast: Description of a Case. Pathologica 86(1): 98-101, 1994
3- Rogers DA, Lobe TE, Raro BW, Fleming ID, et al: Breast Malignancy in Children. J Pediatr Surg 29(1): 48-51, 1994

4- Grosfeld, JL, Weber TR, Weetman RM, Baehner RL: Rhabdomyosarcoma in Childhood: Analysis of Survival in 98 Cases. J Pediatr Surg 18: 141, 1983
5- Hays DM, Donaldson SS, Shimada H, et al: Primary and metastatic rhabdomyosarcoma in the breast: neoplasms of adolescent females, a report from the Intergroup Rhabdomyosarcoma Study. Med Pediatr Oncol 29(3):181-9, 1997
6- Birch JM, Hartley AL, Blair V, Kelsey AM, Harris M, et al: Cancer in the Families of Children with Soft Tissue Sarcomas. Cancer 66(10): 2239-2248, 1990
7- Herrera LJ, Lugo-Vicente HL: Primary Embryonal Rhabdomyosarcoma of the Breast In An Adolescent Female: A Case Report (In press J Pediatr Surg).

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