

## ILEO-ANAL POUCH FAILURE IN A PAEDIATRIC POPULATION

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**Aims:** To quantify the incidence and variables associated with loss of ileo-anal pouches in children.

**Methods:** A single surgeon series of ileo-anal pouches was reviewed assessing pouch excision/permanent diversion. Possible explanatory variables were age, sex, indication for procto-colectomy, use of immunosuppressive drugs, anastomotic leak, number of stages, operative complication excluding anastomotic leak, open or laparoscopic surgery, rank order in series. Logistic regression was used to identify significant variables and Kaplan Meier graphs constructed to assess their effect on survival, comparing survival using the log rank test.

**Results:** Between 1999 and 2015, 103 children, 56 girls, underwent ileo-anal pouch at median age 14 years (SD 3.7). Median follow up was 4.2 years (range 0.3-14). Indications for restorative procto-colectomy were: ulcerative colitis (71), polyposis syndromes (15), chronic idiopathic constipation (9), Hirschsprung's disease (4), Crohn's disease (2), fibrosing colonopathy (2). 12 patients either has their pouch excised or were permanently diverted. Indications for pouch excision/diversion were: incontinence (4), abdominal pain and distension (3), inability to form pouch at initial procedure (2), exacerbation of known Crohn's disease (1), chronic pelvic sepsis (1), and chronic pouch vaginal fistula (1). All incontinent pouches were incontinent before surgery, three with idiopathic constipation and one with ulcerative colitis. Frequency of explanatory variables: exposure to immunosuppressive drugs (73), anastomotic leak (4), 2-stage surgery (59), 3-stage surgery (44), complication excluding leak (26), laparoscopic procedure (62). Faecal incontinence prior to surgery predicted pouch failure, otherwise only anastomotic leak predicted pouch excision, odds ratio 8.9 (95%CI 1.1-70,  $p = 0.038$ ). Pouch survival was significantly worse following anastomotic leak,  $\chi^2=10.6$ ,  $p = 0.001$ .

**Conclusions:** Pouch failure occurs in 12% of children following restorative procto-colectomy. Faecal incontinence prior to surgery should be a contra-indication. Anastomotic leak increases the probability of later pouch excision.

