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CONGENITAL AGANGLIONOSIS;

SINGLE STAGE TRANSANAL PULLTHROUGH, A BIG RELIEF TO PATIENTS

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ABSTRACT... Objective : To report early and late outcome after a one stage operation and comparison with others similar work and to see feasibility of this procedures in our limited resources. **Patients and method:** We have performed transanal pull through in department of Paediatric Surgery, Nishtar Hospital Multan during May 2010 to May 2013. Fifty patients out of 117 were selected, older than one year, non marasmic and diagnosed as short segment aganglionosis by barium enema were selected. Transanal Swenson's pull through was performed, aganglionic segment was decided on gross appearance (narrow) due to lack of frozen section facility, anastomosis made with 4/0 vicryl. **Results:** Procedure completed on an average within one hour, without any transfusion. Feeding was started from day one, manageable complications were observed in 25% patients, no mortality seen. Hospital stay was on an average 6 days. **Conclusions:** Transanal one stage pull through is very practical, can be done without facility of frozen section.

Key words: Congenital aganglionosis, Hirschsprung's disease

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INTRODUCTION

Congenital aganglionosis or Hirschsprung's disease in a common surgical cause of constipation in children. It is due to absent ganglion cells and hypertrophied nerve fibers in Myenteric plexus of rectum and colon due to defect in neural crest. Disease have five types depending upon extent of aganglionosis segment of colon, Ultra short segment, short segment, long segment, total colonic and total gut aganglionosis. Aganglionic segment causes physiological obstruction to passage of stool. Patient presents as constipations since first day of life (delay in passage of meconium), they pass hard stool once every fourth day to once a week. Other features are abdominal distention, Marasmus, repeated attack of enterocolitis and sepsis. Clinical features depend upon extent of colon involved in aganglionosis[1].

Treatment of aganglionosis is in stages, colostomy, and excision of aganglionic segment and anastomosis of healthy colon to anus. Many methods are used for this purpose, Soave's endorectal and Duhamel's techniques are favorite[2]. A new single stage method is getting popular, transanal pull through[3]. This method saves the patient from agony of colostomy, complications of laparotomy and excision procedures of aganglionosis and saves time and money.

This procedure is applicable only for those patients which have aganglionosis up to sigmoid colon[4]. Diagnosis is made by contrast studies of lower GIT. Patient is prepared for this by enemas, aganglionic segment is excised through anus, serial frozen section biopsies are taken during procedure to decide the extent of aganglionosis[5] and coloanal anastomosis is made. Patient can start feeding on fourth day and can be discharged on 5th post operative day[6]. We are presenting our

experience of this procedure in our patients and comparison with others works.

OBJECTIVE

To report early and late outcome after a one stage operation and comparison with others similar work and to see feasibility of this procedures in our limited resources.

MATERIAL AND METHODS

This study is conducted in department of Paediatric Surgery, Nishtar Hospital Multan, a tertiary care teaching hospital affiliated to Nishtar Medical College Multan, Pakistan from May 2010 to May 2013. A total of 50 patients were selected.

Attendants of patients were mentally prepared for long preoperative management of gut by kleen enemas till age of one year. This bowel preparation keeps patient healthy and reduces colon diameter for easy trnasanal pull through[7].

Patients of short segment Hirschsprung's disease were diagnosed by history and barium enema. Daily bowel washes were done by parents at home and patients were kept on follow up, twice a month. Patients were admitted in hospital at age of one year, weight 7kg and haemoglobin more than 10grams. Transanal Swenson's pull through was performed, a ganglionic segment was decided on gross appearance (narrow) due to lack of frozen section facility[8], till dilated hypertrophied suspected normo ganglionic segment was approached, anastomosis made with 4/0 vicryl. Time of surgery was noted, approximate blood loss was recorded. Oral feeding of transparent liquids (non stool forming) was started on day one, milk and solid feeding on day 5. Patients were observed for distension abdomen, fever, bleeding and other complications. Patients were discharged on day 7 and kept on follow up for above noted complications. Post operative anal dilatation plan was not started unless required for anastomotic stricture. Data was maintained on a Proforma, analyzed and compared with international data.

RESULTS

50 patients were operated during this period. Average time spent during each surgery was one hour; blood loss was so small that there was no need of perioperative blood transfusion. Patients were kept nil by mouth for one days, normal feeding was started on day 05.

Movements	No. of cases	%age
1-2 per day	19	38.0
3-4 per day	17	34.0
> four	11	22.0
Constipation	02	04.0
Fecal incontinence	01	02.0

Table-I. Number of Bowel movements

Complications	No. of cases	%age
Bleeding rectum	02	04.0
Perineal viral infections	01	02.0
Neurogenic bladder	01	02.0
Anastomotic stenosis	02	04.0
Fecal incontinence	01	02.0
Enterocolitis	05	10

Table-II. Postoperative complications

Average hospital stay was 6 days (5 to 8 days). Postoperative dilatation was not advised unless indicated (in patient of stenosis and constipation) 02 patient. No patient died during or after surgery.

DISCUSSION

The results from this study showed that a one-stage operation is a safe procedure for HD. There were no patient deaths and the complication rate is low, 6.2% in a study (9). Blood loss during surgery was minimal and no patient needed blood transfusion as experienced by other surgeons[10]. All passed one to four stools per day. There were low rates of incontinence and constipation only one patient. This favours the worth of naked eye decision of normo ganglionic segment with out facility of frozen section.

In our study, anastomotic stricture and rectal stenosis occured in two patients. The rate of these complications has been reported as 15.7–22%[11,12]. A short rectal cuff may be an important factor in avoiding these complications. Follow up results after the one stage operation were satisfactory.
Enterocolitis occurred in 10% of patients, although No patient had severe enterocolitis that required colostomy. Physical development was quite good in most patients, and the rate of malnutrition reduced markedly after operation, this observation was noticed and verbally reported by parents.

The one-stage operation is an economic approach because it reduces the number of operations and the length of hospital stay[13]. It is very practical for children in developing countries and may also reduce the level of psychological stress for parents and children by reducing the number of operations.

A one stage operation can avoid the agony and complications related to colostomy, which can occur at high rates of 32–67%[14,15]. Complications related to closure of colostomy, which occur at a rate of 15%[16,17], are also avoided.

Neurogenic bladder observed in our one patient, such complication is not reported; probably our patient was of micro colon mega cystic syndrome.

CONCLUSIONS

Transanal one stage pull through is very practical for children in developing countries and can be done without facility of frozen section. Level of aganglionosis can be decided by combination of barium enema (lateral view) and peroperative excision of total narrow segment.

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