

# SURGICAL PROCEDURE TO IMPROVE ON CONTINENCE IN CHILDREN

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## ABSTRACT

Operational repair of anorectal malformations frequently present with faecal soilage as the dominant complication. Series of operations have been attempted but none fully satisfies the criteria for continence. A child that present with faecal soilage is a societal problem especially when he is away from the home environment. Several authors have adopted very expensive procedures such as microsurgical interpositioning of skeletal muscle fibres but these are largely beyond the scope of developing countries. Therefore the search for cheaper but equally effective method is imperative. The surgical procedure that narrows the ano-rectal junction which was adopted in this series was able to improve on continence in this group of patients, and is best carried out when the child is 6 years and above.

**Key Words:** Faecal, Incontinence, Anorectal Operation

## INTRODUCTION

The societal embarrassment associated with soilage has necessitated the continuous search for method to improve on continence Nixon 1978. Variety of methods are currently in use (Beaten et al 1995, Vaizey et al 1988) but none of the methods to the knowledge of the authors has satisfied all the conditions required for continence. Microsurgical operations with skeletal muscle interposition and artificial sphincter device are all costly (Damm 2001) surgical procedure that is well beyond the reach of the poor patients even where social benefits are practiced. With these factors in mind therefore, it became necessary to search for a simpler but effective method to help improve on the continence in this group of patients.

## PATIENTS AND METHOD

This was a prospective study of children with faecal incontinence who presented at the University of Calabar Teaching Hospital (UCTH) between January 1994 to December 2000. To qualify for inclusion in this study the children must fulfill the following 3 criteria:

- (1) Be aged 16 years and below
- (2) Have a history of faecal incontinence as demonstrated by soilage

- (3) Must have failed conservative and training method to achieve continence.

Questions were asked in a attempts to determine the causative factors. Physical examination focused on the nutritional status of the patients and the tone of the anal sphincter by attempting the anal squeeze test. Relevant laboratory investigations included blood count and stool microscopy for parasites.

The operational repair involved a circumscribed incision around the anal verge. (Stage 1). This dissection is deepened into the subcutaneous layer and dissection carried forward circumferentially to expose the anal serosa. The depth of the dissection is adjudged adequate when about 3-4cm of the anal serosa is exposed towards the rectum. This then exposes the fibres or its remnants of the external sphincter muscles. Interrupted absorbable sutures are then applied in such a manner that the fibres of the external sphincter muscle are in apposition with the anal serosa all the way round. (Stage 2). The overlying skin is then closed with non-absorbable sutures (Stage 3). This allows for sitzbathing and is removed when the wound heals. At the end of the procedure the same examining index finger used in the anal squeeze test is inserted into the anal canal and the grip is adjudged correct if the

Table 1: Aetiological Factors Of Faecal Incontinence In 51 Children In Ucth

Factors	No. of Patients	(%)
(1) Post Operative complication of anal agenesis	25	(49.0)
(2) Post operative complication of aganglionic megacolon	13	(15.7)
(3) Rectal prolapse	8	(15.7)
(4) Spina bifida	5	(9.8)
<b>Total</b>	<b>51</b>	<b>(100)</b>

Table 11: Outcome Of Treatment In 51 Children With Faecal Incontinence In Ucth

Outcome of treatment	No. of Patients	(%)
Improved sensation to contents in the rectum	46	(90.2)
Full Continence	27	(52.9)
Partial Continence	19	(37.2)
Nil Continence	5	(9.8)

finger slips firmly through. All the patients were followed up for a period of 6-12 months.

## RESULTS

During the period of this study, 51 children – 27 boys and 24 girls – were treated in the UCTH for faecal incontinence. No child under 1 year presented but majority of the patients 25 (49%) were aged between 6-10 years.

The aetiological causes of faecal incontinence in this study is presented in Table 1 and can be seen that complications of anal agenesis operation accounted for majority of the patients – 25 children (49%). Others were complications from aganglionic megacolon operations – 13 (25%), rectal prolapse 8 (16%) and spina bifida – 5 (10%).

The result of operation showed that 46 of the patients had improved sensation to rectal contents as the patients were able to signify of the urge to defaecate. However, this ability was most noticeable in the older age group, able to express themselves. Various degrees of continence however developed as 27 patients were continent. In 19 patients continence was only partial and in 5 patients though having the rectal sensation they still had some degrees of soilage.

Overall, in a follow-up period of 6-12 months constipation was seen in 11 children (31%) and proctitis in 5 patients. The lack of control in the 5 patients in this series was found to be those with spina bifida.

## DISCUSSION

The maximum age range at presentation in this study was the 6-10 years age bracket which is when the child is away from the home environment and now at school. The societal embarrassment associated with this condition of soilage therefore compels the parents to seek medical assistance. Patients are rarely fully continent after any type of surgery and may require the treatment of residual symptoms (Damm 2001). Most patients have problems that are correctable by less invasive procedures. In this survey, the late presentation of patients for medical assistance may mean that the fibres of the external sphincter muscle have further developed leading to good outcome of the operation this procedure is therefore advocated for children aged 6 years and above. This results however contrast with the results of other authors (Isokov 1986, Andrew, 1992) whose series were in the 1-3 years age bracket. That the spina bifida

patients had no control signifies a much more neurological and muscular tone deficit.

Thiersch's stitch insertion, though recommended by some authors (Archibong 1996), howbeit as a stop gap measure was not useful in this survey. In this Thiersch's procedure, the narrowing is at the anal verge leaving the rectum to be loaded with faecal matter, which invariably leads to distention of the anal canal and overflowing of the contents. In this our adopted procedure, the narrowing is at the ano-rectal junction which then leaves a considerable length for control.

In conclusion therefore, this procedure simple as it is, was able to improve the continence in 46 patients, and therefore enhance the quality of life in this group of patients. It may be emphasized however that this procedure be adopted in children 6 years and above when the fibres of the external anal sphincters are fairly distinguishable.

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