Management of Imperforate anus in children a study of 20 cases

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Abstract

A prospective study of twenty cases of imperforate anus in children in salahaldeen government from January 2008 to January 2010 .A twenty cases managed 8 patients (40%) of them female and 12pateints(60%) are males the male patient 9(45%) of them have a high type imperforate anus and 3(15%) of the male have low type imperforate anus. the females 8(40%) patients present with anovestibular fistula .all females and all male with high type imperforate anus a protective colostomy done for them .three cases(15%) was low type imperfoate anus treated by anoplasty in the neonatal age group .all females8(40%) patients treated by cutback technique and all male with high type treated by posterior sagital anorectoplasty. closure colostomy done in 8 to 12 weeks of definitive surgery. Two (10%) patients was down syndrome and three (15%) patients have congenital heart diseases.

Introduction

Imperforate anus is an abnormality of the anus and rectum that is present at birth. The infant is born without a normal rectal opening. Another name for imperforate anus is "anorectal anomaly." In most cases the imperforate anus is obvious on the first day of life as the infant has no anal opening or, the rectal opening is abnormally placed. Occasionally infants are not diagnosed until several months of age. There is variation in the degree of abnormality of the rectum. It may vary from a low imperforte anus where the rectum may be in the normal location but is too tight to allow the infant to have a bowel movement; to an intermediate imperforate anus where the opening is too close to the urethra; to a high imperforate anus where the rectal opening is completely absent.

Anorectal malformations occur in one in 5,000 live births. There is no known cause. Anorectal malformations occur slightly more commonly in males.

Males are twice as likely to have a high or intermediate anorectal abnormality.

Normally, while the fetus is still developing, the intestine descends through the abdominal cavity to the rectal opening, ending at the rectal sphincter. This sphincter contains the nerves and muscles necessary to sense and control bowel movements. With an imperforate anus the intestine stops at some level before it reaches the rectum. This is referred to as an imperforate anus or an anorectal anomaly.

The decision to perform an anoplasty during the newborn period or to delay the repair and perform a colostomy is based on physical examination findings in the newborn, the appearance of the perineum, and changes that occur during the first 24 hours of life.

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- Operating earlier and in a single stage is potentially beneficial to the patient, but this should be decided carefully, based on the specific circumstances of the newborn and the experience of the surgeon. A more conservative approach is warranted in neonates with low birth weight and associated cardiac or respiratory conditions.
- : Newborn boys
    - Anoplasty - Rectoperineal fistula
    - Colostomy - Rectobulbar urethral fistula, rectoprostatic urethral fistula, rectovesical fistula, imperforate anus without fistula, rectal atresia
- Newborn girls
    - Anoplasty - Rectoperineal fistula
    - Colostomy - Rectovestibular fistula, imperforate anus without fistula, persistent cloaca, rectal atresia, rectovaginal fistulacloaca, rectal atresia,

Patient and methods

A prospective study of twenty cases of imperforate anus in children in salahaldeen government from January 2008 to January 2010. A twenty cases of imperforate anus in children was managed by the same surgeon most of patient managed by three stages (colostomy, definitive surgery, and closure of colostomy).and few patient treated by one stage operation by anoplasty during neonatal period .patient evaluated for sex, age type of imperforate anus ,any congenital anomalies, any genitourinary fistula, invertogram done for all male patients to evaluate

low type from high type imperforate anus . Evaluation of patient in the first 24hours for fistula by observation of color of urine if green it contain meconium. Any congenital anomalies by examination and investigation .Then after 24hour either colostomy or anoplasty which done in three patient and .Colostomy done in neonatal period in all high type males, and in most of female and two female colostomy done later on. In all female colostomy done , all female have rectovestibular fistula .when patient become about 10kg or about one year definitive surgery done in males posterior sagital anorectoplasty after preparation of bowel. After two weeks regular dilatation done .In females cutback technique done and transposition of anus in lethotomy position and regular dilatation done ,after 8-12weeks closure of colostomy done after preparation of bowel .all patients follow regularly after closure of clostomy .

Results

A twenty patients of imperforate anus was managed 8patient s (40%) was female and 12patients (60%) was male .The male patients 9 of them (45%) was high type imperforate anus according to clinical examination and ivertogram .All of the nine patient have urinary fistula .Three male patient(15%) had low type imperforate

anus , two fistula(10%) and one bucket handle(5%) .All 8 female patients (40%) have anovestibular fistula .The twenty patients are evaluated for any congenital anomalies by examination and investigation (radiography and ultra sound)two patients (10%) have down syndrome and three patients(15%) have congenital heart diseases. All 17 patients (85%) with colostomy male or female treated by pelvic colostomy. The low type imperforate anus patients (15%) was males and treated without colostomy in the neonatal period by anoplasty and then regular dilatation. The nine male patients(45%) with high type imperforate anus treated by three stage procedure ,which are colostomy in the neonatal period and posterior sagital anorectoplasty at about one year of age or when he became about 10kg after that regular dilatation done .The8 female patients(40%) was treated by cutback technique and transposition of anus at about one year of age and frequent dilatation done .complication occurs in two patients(10%) as colostomy stenosis, and one case as infection at the site of surgery.

Discussion

Imperforate anus management is important to be treated by protective colostomy specially in high type ...6 All our patient in which they have high type or anovestibular fistula treated with protected colostomy to prevent any serious infection and destruction of the area (7). Incidence was12 males (60%) and 8 females (40%) incidence in male more than female and that's go with other studies Levitt 2005...7 Congenital anomalies of the heart 3 (15%) and down syndrome2(10%) is recording anomaly in our study and in other studies there is more congenital anomalies than our study this may regard to have invasive investigation in neonatal period (.8).

Our patient treated with colostomy all of them treated by pelvic colostomy that's go with other studies stein1998.We depend for the diagnosis on clinical examination and radiological studies (invertogram) and careful survey for any obvious or hidden congenital anomalies and this goes with other study (9). Nine of our patient have urinary fistula and all of them to the urethra and this goes with other study when urethral fistula is the most common type (10). Repair done by posterior sagital anorectoplasty in 9 patient (45%) and ligation of fistula, those goes with other study (10), anoplasty done by one stage during neonatal period and no need for colostomy in three patients (15%) and this go with (11). cutback technique and transposition of anus done in 8 females patients (40%) and all have colostomy and frequent dilatation done this goes with other study (11).

Closure of colostomy done after 8-12 wks after preparation of bowel and this goes with other studies, (13). The present study conclude that repair of imperforate anus better to be protected by colostomy in high type and in anovestibular fistula. Posterior sagital is the procedure of choice in male .

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Table 1 show type of fistula

	Female	male
Incidence	12(60%	
Low type	3(15%)	8(40%)
High type	9(45%)	
Fistula	9(45%)	
Anovestibular fistula		8(40%)

Table 2 show the site according to sex

Site of Fistula	male	Female
Posterior sagital anorectoplasty	9 (45%)	-------
Cut back technique	------	8 (40%)
anoplasty	3 (15%)	-------

Table 3 show the distribution of male & female patients according to surgical interventions

	Male	Female
Colostomy	8(40%)	9(45%)
Down syndrome	2(10%)	2(10%)
Urinary fistula	---	9(45%)
No colostomy		
Cutanious fistula	8(40%)	3(15%)
No colostomy	--------	3(15%)