

Congenital Hernia - Four Year Experience in a Teaching Hospital

Balaji Dhanaram, Govindharaj Venkatraman

Karpaga vinayaga institute of medical science

Abstract: *Objective of the study: to analyse the effectiveness of the treatment procedure for congenital hernia in our hospital. Material and methods: all cases of congenital hernias operated between January 2008 to March 2011 were analysed (both elective and emergency). Various factors like age, sex, presentation, side, pre op evaluation, anesthesia, duration of surgery, and post operative period were compared and analysed. Conclusion: elective open hernia repair is a safe procedure for children, and this study indicates quick elective surgery immediately after diagnosed gives good results.*

Keywords: *Congenital hernia, inguinal hernia*

I. Introduction

Congenital hernia is a fairly common condition in children. It has an incidence varying from 3.5 to 5% in full term children to 9 to 11% in pre term children^{1,2}. It may present from neo natal period to adolescence and the treatment once diagnosed is mostly surgery. When done early, surgery cures the condition and prevents complications. It is in fact one of the common procedures done in children. Technically open procedure is relatively simple and can be done easily. When done electively it prevents morbidity and mortality associated with emergency surgeries done for obstructed congenital hernia. Hence it is understandable that elective surgery for congenital hernia as soon as diagnosed is a sensible and safe option. Even in preterm babies surgical correction of the defect has been advocated by studies in spite of high peri operative complications³. The risk of contralateral inguinal hernia in babies has been found to be about 7% and thus does not warrant routine contralateral exploratory procedure in patients presenting with unilateral hernia⁴. About 50 percent of hernia recurrences present only after five years after the original herniorrhaphy⁵.

AIM

To analyse the effectiveness of open herniotomy for congenital hernia in a teaching hospital among rural population.

II. Material And Methods

A retrospective analysis of all children who have undergone surgery for congenital hernia in our hospital from January 2008 to March 2011 was performed. A total of 100 children operated as elective and emergency were included. The clinical data was obtained from case sheets and out patient records. Various relevant factors like age, sex, side, mode of presentation, subjects pre operative status, nature of surgery (elective/emergency), any optimisation, duration of surgery, contents of the sac, post operative period, stay, occurrence of complications and drugs (antibiotics) used were analysed. In our hospital all the cases included were operated by only open hernia repair though laparoscopic surgery was available. Twelve children more than 15 years diagnosed and operated as congenital hernia were excluded and 24 children with congenital hydrocele, confirmed during surgery, were also excluded.

Preoperatively all of them had complete blood profile, renal function test and urine routine done. Twelve children who had respiratory infection were treated with antibiotics and bronchodilators for a week and then taken up for surgery after re assessment by anaesthesiologist.

III. Results

Among the study group 83% of children were from low socioeconomic status with their parents being daily wagers. Only 17% were from salaried families. This was because of the location of the hospital and the type of population it caters to.

On analysing the presenting age of the patients, maximum number of children presented in the 5 to 10 year age group (58%) followed by 2 to 5 year age group (32%). Neonates were the least presented with 3%. Out of the 100 children in the study 97 were male and only 3 were females and with regarding the laterality 84% had right sided hernia and the remaining 16% had left sided hernia.

The common presenting complaints were swelling and pain. About 82% presented with swelling and 3% presented with pain. The remaining 15% were diagnosed during routine check up by the paediatrician. The duration of symptoms was less than 1 year in 79%, 1 to 2 years in 12% and more than 2 years in 9%.

An elective surgery was performed in 97% of patients while 3% underwent an emergency procedure. The most common mode of anesthesia was general anaesthesia (93%). Though all the kids underwent open hernia surgery two methods had been used by the surgeons, root of scrotal incision in children less than 3 years and inguinal canal approach in older than 3 year age group. Testis was normal in all children.

The duration of surgery was less than 30 minute in 90 cases and between 30 to 60 min in 10% of cases. The skin was sutured with 3/0 ETHILON in 89% and 3/0 CHROMIC CATGUT in 11%. The most common content in the hernia sac was small bowel in 49% followed by omentum in 44%

Ninety children had received I.V. antibiotics during anaesthesia induction and oral antibiotics postoperatively. Ten children had received only oral antibiotics. All children had received analgesics namely (paracetamol or brufen.)

Table 1: Duration of hospital stay in operated children

Duration of hosp stay	Number of cases
Less than 3 days	89(no complications)
More than 3 days(7days)	6(Irti)
8 days	2(scrotal edema)
10 days	3(wound infection)

The duration of hospital stay was as shown in Table 1. All 11 patients who developed complications responded for the conservative treatment given and were discharged after full recovery.

All children were advised regular follow up, according to records ,were followed for various periods of time as shown in Table 2. Two male children had undergone (5 yrs and 11 yrs) appendicetomy 1yr and 2 yr after hernia surgery respectively. No recurrence was noted during the follow up period. About 3 % of children complained of chronic pain during the follow up period, but it was not affecting their daily activity and responded to conservative treatment.

Table 2: Follow up of children

Duration of follow up(yrs)	More than 3 dys(7dys)	Number of recurrences	Number with chronic pain
Less than 3 yrs	79	0	1
3-4 yrs	10	0	2

IV. Discussion

In our study sample, the commonest age of presentation was between 5-10 yrs (57%) in comparison with the study by Hassan et al wherein all the 33 patients included in the study were males between the age of 4 months and 7 years⁶. The sex distribution in our study was predominantly males (97%) which correlates well with other studies such as the study by Ravikumar et al wherein 94% of them were males and 6% of them were females⁷. Our sample had 3% emergency presentations similar to his study where irreducibility was seen in 4%. Surgical management of inguinal hernias should be done preferably as an elective procedure as incarcerated hernias have a higher incidence of complications such as intestinal necrosis, omentum and appendix infarction, infarction of the testis, torsion of the ovary, recurrent hernia and wound infection⁸.

About 85% had symptoms the commonest being swelling in the inguinal region similar to the study by Ravikumar et al⁷ who reported it in 86% of patients followed by absence of testis in 10%. Right sided hernias predominated in our study(84%) similar to other studies⁹. Majority of cases were done within 30 minutes(90%) similar to other studies whose operative time for open repairs also ranged from 20 to 35 minutes⁶. In our study followup showed no recurrence, though the follow up period was variable. About 3% complained of chronic inguinal pain which was less than the 5.1% reported by Kristensen et al in 2012¹⁰. In the comparative study by Hassan et al also the post operative recurrence was nil in open procedures while it was significantly high(27%) for laparoscopic procedures⁶

V. Conclusion

Open hernia repair was a very safe and effective surgery for congenital hernia in children. Though laparoscopic repair was available, open repair was found to be a cost effective procedure for the rural population and can be strongly advocated for small rural hospitals where laparoscopic equipment may not be available. Our sample had excellent results, especially when operated electively with very little morbidity and no recurrence. This strongly supports elective open hernia repair as soon as congenital hernia is diagnosed as a safe and viable surgery for congenital hernia.

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