

A TWO YEAR RETROSPECTIVE STUDY OF CONGENITAL INGUINAL HERNIA AT WESTERN REGIONAL HOSPITAL NEPAL

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ABSTRACT:

In a retrospective study of 133 cases of inguinal hernia in infants and children upto the age of 14 years, treated surgically at Western Regional Hospital, Pokhara, Nepal between April 1st 1997 and March 31st 1999, it was found that male patients out number female patients in the ratio of 13.7:1 Right sided hernia was almost twice as common as compared to left. Only 1.5% of patients (2cases) had bilateral inguinal hernia. 4 patients (3%) presented with obstructive features. Routine exploration of contralateral side was not done as most surgeons do not recommend this, as only 20% develop hernia on the contralateral side.¹ Only one patient had recurrent hernia.

Key words: Congenital, hernia, inguinal, retrospective, incarceration.

INTRODUCTION:

An Inguinal hernia is the most common condition requiring operation in the pediatric age group. The incidence of inguinal hernias in children has not been established but is between 10-20:1000 live births.² Hernias can be life threatening or can result in the loss of testis or ovary or a portion of the bowel, if incarceration or strangulation occurs.³ Timely diagnosis and operative therapy are thus important if these complications are to be avoided.

The processus vaginalis, which gives rise to usual pediatric indirect inguinal hernia, is present in the de-

veloping foetus at 12 weeks of intra uterine life. The processus is a peritoneal diverticulum that extends through the internal inguinal ring and is dragged into the scrotum with the testis. The portion of peritoneum (processus) enveloping the testis becomes

the tunica vaginalis. The remainder of the processus within the inguinal canal eventually obliterates, thus eliminating the communication between the scrotum and the peritoneal cavity. In about 40%, processus vaginalis remains asymptotically patent throughout life.³ The incidence of indirect inguinal hernia in the general population of in-

Fig. 1

Right Sided congenital inguinal hernia in 2 year old male child.

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infants and children approximates 1-5%.⁴ In most series male children with hernias outnumber female children by 8:1 to 10:1 ratio.¹ Premature infants have a greatly increased risk for development of inguinal hernias. This high risk of inguinal hernia with risk of incarceration that exceeds 60% in the 1st 6 months of life,⁵ makes surgeons to recommend repair of hernia in infancy.

Additional associated diseases have been found to increase both the incidence of hernia and the risk of recurrence after repair. Patients with cystic fibrosis have upto a 15% incidence of inguinal hernia.⁶

Direct and femoral hernias in children are extremely rare. The hallmark of an inguinal hernia in a child is a groin bulge extending to the top of the scrotum, which is visible most frequently during periods of increased intra-abdominal pressure eg. crying, laughing, straining.⁷

The treatment of choice for an inguinal hernia is operative repair, an inguinal hernia will not resolve spontaneously. The operation should be carried out electively shortly after diagnosis because of the high risk of later incarceration, especially during first year of life.

MATERIAL AND METHODS:

The records of all congenital inguinal hernia patients upto the age of 14 years admitted in Western Regional Hospital, Pokhara, from April 1st 1997 to March 31st 1999 were examined and data was collected on customized data sheets e.g. age, sex, family history of hernia, presenting symptoms, treatment given, post-operative complications and follow up.

RESULT AND ANALYSIS:

1.

Sex	Number of patients:	Percentage
a. Male	124	93.2%
b. Female	9	6.7%
Total	133	100%
Ratio	13.7:1	

2. Age : Sex frequency table

Age (years)	Male	%	Female	%	Total	%
0-1	8	6%	2	1.5%	10	7.5%
1-2	19	14.2%	2	1.5%	21	15.7%
2-3	20	15%	0	0%	20	15%
3-4	7	5.2%	1	0.75%	8	6%
4-5	18	13.5%	0	0%	18	13.5%
5-6	17	12.7%	1	0.75%	18	13.5%
6-7	6	4.5%	1	0.75%	7	5.2%
7-8	5	3.7%	0	0%	5	3.7%
8-9	2	1.5%	0	0%	2	1.5%
9-10	8	6%	0	0%	8	6%
10-11	2	1.5%	0	0%	2	1.5%
11-12	8	6%	2	1.5%	10	7.5%
12-13	1	0.75%	0	0%	1	0.75%
13-14	3	2.2%	0	0%	3	2.2%
Total	124	93.2%	9	6.7%	133	100%

3. Side involved

No. of children	Right (%)	left (%)	Bilateral (%)	Total (%)
	82 (61.6)	49 (36.8)	2 (1.5)	133 (100)

4. Family history of hernia

No. of parents/siblings	Father (%)	Mother	Brother (%)	Sister
	11 (8.2)	0	2 (1.5)	0

having hernia

5. Associated anomalies

	No (%)
a. meningocele	1 (0.7)
b. cystic hygroma	1 (0.7)
c. atrial septal defect	1 (0.7)
d. umbilical hernia	4 (3.0)
Total	7 (5.2)

6. Summary of treatment

a. Operated	133 (100%)
b. Bilateral	2 (1.5%)
c. Unilateral	131 (98.4)
d. Subsequent contralateral	2 (1.5%)
e. Recurrence	1 (0.7%)

7. Morbidity following herniotomy

Wound infection	4
Haematoma	1
Recurrent hernia	1

DISCUSSION:

Age of the patients

95 out of 133 patients were under the age of 6 years representing 71.4% in our study. The number of patients less than 1 year of age in our study was only 10 (ie 7.5%). This finding is contrary to most studies where 50% of the patients are less than 1 year of age.² The late presentation may be due to lack of awareness of this surgical problem its and potential complication among the parents.

Side involved

82 right sided hernia accounted for 61.6%, with a Right : Left ratio of about 2:1. This finding corresponds with the observation of congenital inguinal hernias in many series.^{1,4,7}

Family history of hernia

Positive family history was reported in 13 patients (10%). Louftr et al⁸ have reported a 11% positive family history in the series of congenital inguinal hernia treated surgically. In more than 84% (11/13 cases with positive family history), the father had congenital hernia.

Associated anomalies

Umbilical hernia is commonly associated with inguinal hernia. Increased incidence of hernia among premature babies were reported by Harper et al,⁹ but in our series no premature babies presented with inguinal hernia.

Summary of treatment

All 133 patients had herniotomy. Only 2 patients presented with bilateral hernia for which bilateral herniotomy was done. 4 patients presented with obstructive features, and emergency herniotomy was done and bowel was found to be viable. Only 1 patient had recurrence which was of an indirect inguinal hernia-probably the sac had not been indentified correctly at the initial operation. A high success rate of >99% were achieved for our patients who had herniotomy.

COMPLICATIONS:

Wound infection was the major morbidity as 4 patients (3%) had either minor or major wound infections. Only one patient needed secondary suturing. The overall complication rate of elective herniotomy is expected to be 1.7%.¹⁰

Follow up

All patients were followed up for a period of 4-6 months to look for recurrence of hernia or appearance of hernia on the contralateral side, there was 1 recurrence and 2 hernias appeared on the contralateral side.

CONCLUSION:

1. Herniotomy is a safe and effective operation for hernias in infants and children, with insignificant morbidity/mortality.
2. There is a need for an increase medical awareness among the general population, for early detection and operation.
3. Hernias in infancy and childhood can be easily managed in the department of general surgery in a district referral hospital like Western Regional Hospital, Pokhara.

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