



## ANATOMICAL BASIS OF INGUINAL HERNIAS IN CHILDREN AND ITS MANAGEMENT IN THE GENERAL SURGICAL PRACTICE

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### ABSTRACT

**BACKGROUND:** Inguino-scrotal swellings are a common incidence in pediatric age groups, often associated with abnormalities inside the descent of the testis and the failure of the processus vaginalis to shut well. Amongst those anomalies, inguinal hernia and hydrocele are the maximum often determined congenital situations. The occurrence of inguinal hernia is mainly high in preterm toddlers. With advancements in infertility treatment and upgrades in neonatal care, the survival charge of untimely toddlers has increased, circuitously leading to a better incidence of inguinal hernia and hydrocele inside the pediatric population. Diagnosis of inguinal hernia in pediatric patients is based totally at the records supplied with the aid of mother and father and medical examination performed by means of pediatricians and surgeons. Extra investigations are carried out to rule out any related anomalies. As soon as the prognosis is confirmed, the most common remedy for inguinal hernia in pediatric patients is surgical closure of the patent processus vaginalis, known as inguinal herniotomy. whilst laparoscopic restore is a well-set up remedy choice for inguinal hernia in adults, its position in pediatric instances is restrained. A few surgeons may also choose laparoscopic restore, mainly in bilateral instances. This look at ambitions to discover the connection among various factors consisting of age, sex and maturity, and the prevalence of inguinal hernia in children.

**OBJECTIVES:** To study the epidemiology, management and outcome of inguinal hernia in children. Additionally, it seeks to identify any associated anomalies and evaluate the consequences of surgical intervention in pediatric sufferers with inguinal hernia at our Tertiary care center

**METHODS:** A prospective study was conducted on pediatric patients with inguinal hernia for a period of 18 months, between 2021 to JAN 2024. Patients from newborn to 13 years of age were selected for this study.

**RESULTS:** Inguinal hernia can occur at any age, but the majority of patients are seen between 1 to 5 years of age. It is more commonly seen in male children and incidence is slightly higher on right side. Almost all of the inguinal hernia in the pediatric age group is of indirect type, which develops due to congenitally patent processus vaginalis.

**CONCLUSION:** Early surgical intervention in form of Inguinal herniotomy is the most appropriate management of inguinal hernia in children.

**Keywords:** Inguinal hernia, Pediatric, Herniotomy, Hydrocele.

**INTRODUCTION**

Inguino-scrotal swellings are one of the commonest anomalies in pediatric age groups. Most of them are related to the abnormalities of descent of testis and failure of obliteration of processus vaginalis. [1] Among these, the most common congenital anomalies are inguinal hernia and Hydrocele. The incidence of inguinal hernia is even higher in preterm babies. Because of the advancement of treatment for infertility and of improvement of intensive neonatal care in last few decades, the survival of premature babies is increasing and as a result, it has indirectly increased the incidence of inguinal hernia and hydrocele in pediatric age group.

Inguinal hernia in pediatric age group is mostly diagnosed by pediatrician and surgeons on the basis of history (given by the parents) and clinical examination of the child. Investigations are mainly done to rule out the associated anomalies. Once the diagnosis is confirmed, surgical closure of patent processus vaginalis (inguinal herniotomy) is the most common treatment in pediatric age group. Although laparoscopic repair is an established treatment for inguinal hernia in adults, still it has got little role in the repair of pediatric inguinal hernias. Some surgeons favor the repair of inguinal hernia in pediatric age group by laparoscopic procedure, especially for bilateral cases. This study is intended to find out the relation of various factors like age, sex, side, etc. with inguinal hernia in children, and also to find out the associated anomalies and outcome of surgical intervention in pediatric patients with inguinal hernia in our hospital.

**MATERIAL AND METHODOLOGY**

This prospective observe turned into conducted within the department of surgery at A Tertiary Care Hospital in North India over a length of 18 months, from December 2021 to Jan 2024. Pediatric sufferers with inguinal hernia, starting from newborns to 13 years of age, had been protected in the have a look at. A complete of 66 sufferers were studied all through this period. Childrens with congenital anomalies apart from inguinal hernia were excluded from the have a look at. Hydroceles had been now not covered in the have a look at. Inguinal hernias had been recognized by means of obtaining an in depth clinical records from the Parents/Guardians, accompanied through a clinical exam of the inguino-scrotal area of the sufferers. The sufferers were admitted to the surgical ward and fundamental investigations were carried out in all cases, with unique investigations such as USG abdomen and inguinal scrotal vicinity being executed simplest in selected cases. After a radical pre-operative evaluation and preanesthetic checkup, all patients underwent corrective surgical procedure. The approaches had been accomplished underneath suitable anesthesia (widespread anesthesia with caudal block/ Spinal anesthesia). Inguinal herniotomy Were Successfully performed .Following discharge, all patients were advised to attend the surgical OPD for necessary follow-ups.

**RESULTS**

The look at included sufferers ranging from newborns to 13 years antique, classified into four organizations primarily based on age: 1 to 5 years, 5 to 10 years, and > 10 years. The highest occurrence became determined in the 5-10 years age group (54.54%).

Table1: Distribution of cases with respect to age

AGE	NUMBER OF CASES	PERCENTAGE
1-5 years	25	37.87%
5-10 years	36	54.54%
> 10 years	05	7.57%

Table2: Distribution of cases with respect to gender

	TOTAL NUMBER	PERCENTAGE
MALE	63	95.45%
FEMALE	03	4.54%

Table3: Distribution of cases with respect to laterality

SIDE	NUMBER OF CASES	PERCENTAGE
RIGHT INGUINAL SWELLING	44	66.66%
LEFT INGUINAL SWELLING	16	24.24%
BILATERAL INGUINAL SWELLINGS	6	9.09%

Table4: Incidence of Associated anomalies among the cases

OTHER RELATED ANOMALY	NUMBER OF CASES	PERCENTAGE
Undescended testis	10	15.15%

Our findings align with the studies performed with the aid of Ravikumar et al[2] and Jadhav et al[3], who said an incidence of fifty two% and 44%, respectively, in the 1-5 years age institution. Okuribido et al[4] suggested an incidence of 47.4 % in children elderly 3 to 7 years. Bronsther et al[5] observed that one 1/3 in their patients have been less than 6 months antique. In terms of intercourse distribution, our study covered 63 male youngsters and 3 girl children, ensuing in a male to female ratio of 21:1. Different research have said male to female ratios ranging from 7:1 to 11.5:1. Grossfeld et al[6] reported a ratio of 7:1, Poenarau[7] reported 6:1, Ravikumar et al[2] suggested 9:1, and Jadhav et al[3] mentioned eleven.5:1. Concerning side distribution, we determined a higher incidence of inguinal hernia at the right side (66.66%). 24.24% of hernias have been left-sided and 9.09% had been bilateral. Our findings are constant with the observations of Jadhav et al[3] and Ravikumar et al[2], who stated incidences of 64% and 56% for proper-sided inguinal hernia in their studies, respectively. In addition, Rowe et al[10] and Grossfeld et al[11] additionally suggested a better prevalence of inguinal hernia on the right side.

In our Study, we also tested 3 female patients with inguinal hernia the usage of USG abdomen to rule out intersex conditions. No abnormalities were found in any of the female sufferers. however, at some point of surgical operation. We did not encounter any instances of direct hernia in our look at. Direct inguinal hernias are uncommon in the pediatric age group, representing only 0.5% of all groin hernias[14,15]. Exploration turned into carried out in the absence of scientific inguinal hernia on the other facet. The submit-operative period proceeded easily for the majority of cases, with best three patients (five%) experiencing wound contamination, which changed into effectively handled with antibiotics. for the duration of our look at, the observe-up period varied from 3 months to at least one 12 months, and not using a pronounced instances of recurrence throughout this time frame.

## CONCLUSION

In pediatric patients, inguinal hernia is a time-honored cause of congenital inguino-scrotal swelling. it's far greater regularly found in male children, with a better prevalence at the right side. while it is able to appear at any age, which include in neonates, maximum children broaden it among 1 to 5 years antique. untimely and coffee delivery weight neonates have a better prevalence. most people of inguinal hernias in pediatric sufferers are of the indirect type, resulting from a congenitally patent processus vaginalis. as soon as present, it does no longer resolve spontaneously, necessitating early surgical intervention inside the form of inguinal herniotomy as the most suitable control method for inguinal hernia in children. Failure to deal with it right away can lead to complications consisting of obstruction and strangulation.



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