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Study of Various Aspect of Inguinal Hernia in Childhood

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Abstract | **Original Research Article**

Inguinoscrotal swellings are one of the commonest anomalies in infancy and childhood throughout the world. Delay in Diagnosis and treatment leads to loss of testis, ovaries or portion of bowel to incarceration or strangulation. Present study was undertaken to evaluate the age, sex and sidewise distribution and the complications like incarceration, strangulation and gonadal infarcation in childhood inguinal Hernia. A total of 30 children were selected ranging in age from 6 months to 13 years presenting to the hospital with inguinoscrotal swelling which were examined, followed up and managed. The data were used to interpret results. The initial diagnosis was made from the history and clinical examination. The inguinal hernia was most common among male children 91.47%, then female. Right sided (60.21%) inguinal hernia was more common than left. The most common associated anomaly was hydrocele in (30.7%) and undescended testis. Mainstay of treatment of these swelling was surgical. Most of the swelling are asymptomatic; parents are usually the first person to notice these swelling. All cases of inguinal hernia have to he operated and procedure is Herniotomy.

Keywords: Inguinoscrotal swellings, testis, childhood, strangulation.

INTRODUCTION

An inguinal hernia is a swelling that occurs in the groin area. In children, almost all inguinal hernias are congenital. Between 12 to 14 weeks of fetal development, the testicles or ovaries form in the abdomen near the kidneys. They gradually move down into the lower part of the abdomen as the baby continues to develop in the womb. As they move down in a male, a portion of the peritoneum (a thin layer of tissue that lines the inside of the abdomen) that attaches to the testicle is drawn with it into the scrotum, forming a pouch or sac. A similar process occurs in girls as the round ligament of the uterus descends into the groin at the labia. This sac is known as the processus vaginalis and normally closes shortly after birth. This eliminates any connection between the abdominal cavity and the scrotum or groin. When closure of the processus vaginalis is delayed or incomplete, it may stretch and eventually become a hernia. The steretching of the processus vaginalis creates an inguinal sac, allowing organs to extend from the abdomen and enter the sac. If fluid, rather than organs, builds up and remains in the sac, this is called a hydrocele. In both boys and girls, these areas are supposed to seal off prior to the baby being born. If they fail to close before birth, then the child is at risk of having an inguinal hernia. Given this, it is not surprising that inguinal hernias are more common in premature infants. Approximately 80 percent to 90 percent of inguinal hernias appear in boys. They are more common on the right side, but in about 10 percent of cases, they occur on both sides (bilaterally)[1]. An inguinal hernia can occur at any age, but one-third of hernias in children appear in the first 6 months of life. The hernia defect or hole was likely always there since birth. It was only the straining that pushed something through the hole to make it become noticeable.

Inguinoscrotal swelling is one of the commonest anomalies in infancy and Childhood throughout the world. Among the inguinoscrotal swellings, inguinal hernia and hydrocele top the list in frequency [1]. They represent the conditions most frequently requiring surgical repair in the pediatric age group. Hernia is a latin term meaning rupture of a portion of a structure. It can be defined as a “protrusion of a viscus or part of a viscus through a normal or an abnormal opening in the wall of its containing cavity. As a result of improved neonatal intensive care, more and more premature babies are being delivered and consequently the incidence of neonatal inguinal hernia and hydrocele is increasing. All pediatric inguinal hernias require operative treatment to prevent the

development of complications, such as inguinal hernia incarceration or strangulation.

Materials and Methods

The present study was conducted in P.M.C.H. Patna in the year 2016 in the department of general surgery. A total of 30 children were selected for study, all children age ranged from 6 month to 13 years with inguinal hernia who attended surgical OPD and emergency were selected. Congenital inguinal hernia were diagnosed by talking detailed history from parents in the form of site , size, variability of size, history of non reducibilty or any underlying straining for micturition or presence or absence of testis in scrotal sac, were collected in a prescribed Performa which contains history, clinical examination, investigation and management in one year time bound study. After obtaining the history children were examined systematically which includes examination of inguinal and groin region, scrotum and its contents. Respiratory system, cardiovascular system and per abdomen to know other associated congenital anomalies like undescended testis and other connective tissue disorder.

Children were subjected to routine investigations like Hb%,BT, CT and USG of inguinoscrotal region. Children with unilateral inguinal hernia underwent USG examination using a 7.5 MHz linear transducer. If a CPPV was visible as hydrocele owing to the inflow of physiologic ascites into a processes vaginalis on strainig, then US scanning were performed while the patient was at rest and while inducing straining by standing or crying. A groin with a hydrocele in the inguinal canal on straining was diagnosed as a CPPV and cases were followed for 1 year to know development of contralateral hernia. Ter proper evaluation of preoperative condition and appropriate prepration, surgery is considered. Surgery is decided by age. If the children <1 year af age , Mitchell banks operation is selected where in herniotomy done without opening the external oblique aponeurosis. If the children >1 year of age, Fergusson technique is selected where in herniotomy done after opening the external oblique aponeurosis, under suitable anesthesia as decided by anesthesiologist.

All patients were asked to attend the surgical OPD for follow – ups.

Results

The initial diagnosis was made from the history and clinical examination. The inguinal hernia was most common among male children (91.47%).Male to Female ratio was 14:3:1.Similar study was done by jabed ghoroubi in Pakistan and my result was comparable to his study [3].

The Children were aged 6 months to 13 years and (45.8%) of the children presented around 2 to 8 years and prematurity noticed in (10.40%) of cases. Right sided (60.21%) inguinal hernia was more common than left. In (93.4%) of the cases, hernia was diagnosed by the parents for the first time and (95.65%) of the swellings were asymptomatic in presentation with (4.35%) of patients having acute presentation.

The most common associated anomaly was hydrocele (32.10%) and undescended testis (4.28%), all of them had patent proximal processus vaginalis. This result was comparable with study of Carnelro PM Rwanyua[2]. Mainstay of treatment of these swelling was surgical. All operations were elective and the operations were performed under general anesthesia. In (60.55%) of cases herniotomy and in (6.34%) cases herniotomy with posterior wall repair (for direct hernia) was done. In all cases high ligation of hernia sac was performed. For female patients, the hernia sac was always widely opened and inspected for entrapment of ovary or other structures before twisting and ligating at its neck. In this study indirect hernia was (95.65%) and direct was (4.34%). The (4.34%) undescended testes were on the right side and in the superficial inguinal pouch.orchiopexy was done at the time of hernia repair and the testis was kept in the subdartos pouch. The most common abdominal organ found in the sac was small intestine followed by omentum.

Discussion

One of most congenital anomaly observed by surgeon in children is inguinal hernia and hydrocele. It carries risk of loss of testis or gangrene of bowel due to strangulation, so it requires prompt diagnosis and early treatment. Prevalence of childhood hernia is more in male and on the right side. Congenital anomaly like undescended testis and hypospadias are sometimes found associated with inguinal hernia in children. Infants and children require general anesthesia for operative repair of hernia and hydrocele. Post-operative complications are usually rare following elective operations. Surgery for childhood inguinal hernia is mainly herniotomy.

Conclusion

From our study we concluded that childhood inguinal hernia require prompt diagnosis and early treatment to save the further complication and threat to loss of testis. So any type of inguinal swelling in childhood must be given special attention and care.

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