

Prevalence of Genital Anomalies and Groin Hernias-In Kaiwara PHC Area

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ABSTRACT

Background: This study provides information on the prevalence of genital anomalies and groin hernias in Anganwadi and school going boys in Kaiwara a rural area of Karnataka and parents approach towards these issues.

Methods: A total of 2000 boys attending Anganwadi and schools, aged 2-12 years were screened, those who were identified to have Groin and Genital problems were taken to tertiary care centre after counseling and obtaining consent from the parents. They were reassessed by paediatric surgeons. Necessary investigations and surgery was done free of cost. Following surgery, all the children were monitored postoperatively for seven days and after one month.

Results and Conclusion: Out of the 2000 boys abnormal findings were detected in 82 (4.10%). Commonly observed problems were indirect inguinal hernia, hydrocele, phimosis and undescended testes.

Key words: Genital abnormalities, Groin Hernias, hydrocele, Anganwadi and School children

INTRODUCTION:

Boys are frequently afflicted with genital and groin issues. Finding risk factors that could predict development would help place the patient in a high-risk group. Priority admission and elective surgery for such patients would prevent significant mortality and morbidities. Strangulation is one of the complications that can arise from groin hernias, but it is also a condition that can be easily treated and even life-threatening. To ascertain the surgical problems of the groin and scrotum treated during elective surgery, a study was study with 535 children aged 5 years.¹ In the study for the boys aged 6-12 abnormalities were detected in 320 children among the total study of 1748 boys.²

Due to their lower levels of awareness and education than the urban population, we chose a rural location for this study. In addition to raising public awareness, this study aids in recognizing issues, providing suitable solutions, and dispelling misconceptions about therapy. A number of complications, such as imprisonment, strangulation, and obstruction in the case of a hernia; infection in the case of hydrocele, testicular torsion, trauma, epididymo-orchitis, testicular atrophy, sterility, and malignancy in the case of undescended testes; balanoposthitis, paraphimosis, and urinary tract infection in the case of phimosis; urinary tract infection, painful penile erection, and infertility in the case of hypospadias can be avoided by detecting genital and genital issues early on.

MATERIALS AND METHODS:

Through routine screening programs, this prospective study was carried out among Anganwadi and school-going boys in the Kaiwara, PHC region over a two-year period between April 2004 and April 2006. Before and after health education, the parents of the boys with genital and groin issues were notified, and their attitudes regarding the condition were evaluated.

Boys between the ages of two and twelve who attended Anganwadi and other schools made up the study group. Of the 2000 children screened, 82 were found to have genital and groin issues throughout the screening process. Following medical advice and parental approval, the boys were transported to a Tertiary Care Center. Pediatric surgeons reevaluated them, and all the tests such as hemoglobin, bleeding time, and clotting time were done on all children.

Additional tests, such as a total count, differential count, and chest X-ray, were performed on any kid with a respiratory tract infection before they were scheduled for surgery. All of these surgeries and tests were performed at no cost. Postoperatively, all children were followed 7 days and 1 month after surgery.

RESULTS:

Out of 2000 boys examined 1918 (95.90%) were normal. Abnormal findings were detected in 82 children (4.10%), of which 33 had indirect Inguinal hernia, 22 had hydrocele, 17 had phimosis and 10 had undescended testes. None of them were identified to have Epispadias, hypospadias and Femoral hernia. Inguinal hernia was the most common groin and genital condition, with a prevalence of 4.10% (82 cases). Right-sided issues were more frequent than left-sided ones, and most affected children were aged 6–8 years.

The majority of parents were unaware of their child's condition. Among those who were aware, many sought help from priests or quacks rather than medical professionals. Most were initially unwilling to consider surgery. However, health education played a key role in increasing acceptance of surgical treatment. Table 1 depicts the overall assessment of the study.

Among the 33 children with indirect inguinal hernia, 27 (81.82%) had right sided inguinal hernia, 6 (18.18 %) had left sided inguinal hernia and none had Bilateral inguinal hernia. Among the 22 children with hydrocele, 13 (59.09%) had right sided hydrocele, 7 (31.82%) had left sided hydrocele and 2 (9.09%) had bilateral hydrocele.

Amongst the 10 children with undescended testes, 7 (70%) had it on the right side, 3 (30%) had it on the left side. Only 36 (43.9%) of the parents of the 82 identified children were aware of their children's gastrointestinal and genital problems, whereas 46 (56.1%) were not. Just 20 parents were willing to have their child undergo surgery, compared to 62 parents who were opposed to it before health education; 49 parents gave their consent after being given health information.

Before screening and health education, 12 (33.33%) parents took their children to a doctor, 10 (27.78%) took them to a quack, and 14 (38.89%) took their kids to a temple priest out of the 36 parents of kids who knew their kids had genital and groin issues. Only 12 (33.33%) of the 36 children were recommended for surgery prior to screening and health education, whereas 14 (38.89%) received some oil for local application at the problematic spot and 10 (27.78%) wore huge ear rings on one ear as a kind of treatment. Among the 82 children who were treated at our hospital, 30 children underwent herniotomy and 3 children underwent laparoscopic herniotomy for indirect inguinal hernia, 22 children underwent herniotomy for hydrocele, 17 children underwent circumcision for phimosis, 10 children underwent orchidopexy for undescended testes. All patients were discharged 1-2 days after operation.

Of the 49 children who underwent surgery, 3 children had wound infection and 1 child had scrotal edema during the follow up (7 days post operatively) and none had any complication during the follow up (1 month post operatively). There was no morbidity and mortality in our study.

Table 1: Results of the study

Prevalence of Groin and Genital Problems		
Groin and Genital Problems	Total out of 2000	Percentage
Inguinal Hernia	33	1.65
Hydrocele	22	1.10
Phimosis	17	0.85
Undescended Testes	10	0.50
Total	82	4.10
Incidence of Each Type of Groin Problem		
Side and type of Groin and Genital problem	Total out of 82	Percentage
Right sided indirect inguinal hernia	27	81.82
Left sided indirect inguinal hernia	6	18.18
Right sided hydrocele	13	59.09
Left sided hydrocele	7	31.82
Bilateral hydrocele	2	9.09
Right sided undescended testes	7	70

Left sided undescended testes	3	30
Age Incidence		
Age in years	Total out of 82	Percentage
2-5	20	24.39
6-8	33	40.25
9-10	18	21.95
11-12	11	13.41
Attitude of the parents towards disease		
Awareness	Total Out of 82	Percentage
Aware	36	43.90
Not Aware	46	56.15
Parents Approach to the problem		
Treatment given by	Total Out of 36	Percentage
Temple Priest	14	38.89
Quack	10	27.78
Doctor	12	33.33
Treatment given to the children before health education		
Type of Treatment	Total Out of 36	Percentage
Ear Ring	10	27.78
Oil	14	38.89
Surgery Advised	12	33.33
Parents Attitude Towards Treatment Before Health Education		
Attitude Towards Treatment	Total Out of 82	Percentage
Not Willing for Surgery	62	75.61
Willing for Surgery	20	24.39
Parents attitude towards treatment after health education		
Not willing for Surgery	33	40.24
Willing for Surgery	49	59.76

DISCUSSION:

A safe and efficient approach is to identify and treat genital and groin issues early on before complications arise. Because rural residents are more knowledgeable than their urban counterparts, youngsters living in rural areas were given preference in this study. A study conducted in 2005 revealed that 213 out of 3205 elementary school-age males had genital and groin anomalies.³ In 2000 school-age males, our study found a prevalence rate of 82 youngsters, or 4.10%.

The incidence of indirect Inguinal hernia in general population is 1-5%.⁴ In some studies, 25% of males have been found to develop inguinal hernia in their life time.⁵ A study done in 2005 found the most frequent anomaly was indirect inguinal hernia was the commonest problem identified 33 out of 82 children (i.e.) 1.65% which was consistent with previous studies.³ Direct Inguinal hernia and femoral hernia in children are extremely rare and represent a small percentage in most studies.

According to a study by Fall PA et al. in 2000, the most often affected side was the right side, which accounted for almost 60% of inguinal hernias.⁶ Additionally, our analysis revealed that the right side experienced the most side effects, accounting for roughly 81.82% of all cases.

The incidence of hydrocele among male infants is largely unknown. It is very common in new born males and is self-limiting usually resolves within 6-12 months.¹ Yegane RA et al., concluded in his study that 28 boys (0.87%) out of 213 children had hydrocele. In our study 22 boys (1.10%) out of 82 boys had hydrocele.³

The incidence of pathological phimosis in boys was 0.4 cases/1000 boys per year. Our study showed an incidence of 0.85 cases / 2000 boys.

According to K. Al-Abbadi et al., 2.12% of the children had undescended testes, with around 50% occurring on the right side, 25% on the left and 25% bilaterally.² According to our research, there

were no instances of bilateral undescended testes and 0.50% of the children had undescended testes on the right side and 30% on the left. The estimated prevalence of hypospadias is 0.8 to 8.2% per 1000 live births.⁷ The prevalence of hypopadiasis was 0.74%. No children with epispadias or hypospadias were identified in our investigation.²

Momoh JT conducted a review of 510 cases seen over a period of 10 years showed that, of those with inguinal hernia, 54% had right inguinal hernia (RIH), 35% left inguinal hernia (LIH), 9% bilateral inguinal hernia (BIH) and 2% hydroceles.⁸

Our study showed that most children who were identified to have Groin and Genital problems were in the age group of 6-8 years. Study concluded that out of 82 patients only 36 were aware of problems of which 24 had approached non-medical personals for the treatment before health education. After proper health education, 49 were convinced and were ready to subject their children for proper surgical treatment. This shows the lack of awareness among people in rural area and proper health education helps them to create awareness and the correct approach to treatment. In a study by Al-Abbadi and Smadi showed; of the 235 children with indirect inguinal hernia, 56 had herniotomies, surgery failed in 2 and of the 37 children with undescended testes 4 underwent orchidopexy with 2 failures.² Our study showed of the 33 cases of hernia, 3 patients underwent laparoscopic herniotomy, 30 patients underwent herniotomy. Of the 22 cases of hydrocele; all cases underwent herniotomy, of the 17 cases of phimosis, circumcision was done and all 10 cases of undescended testes underwent orchidopexy. There were no morbidity and mortality in this study.

CONCLUSION:

Inguinal hernias and external genital abnormalities are common in children in Kaiwara PHC area affecting 4.1%. There is obviously a delay in the diagnosis and management of children in this age group due to lack of education and awareness in these population; careful screening of children at preschool and school age at regular intervals is necessary not only for groin and genital problems but also other health problems to avoid later complications. Increased public awareness and early referral of such abnormalities are very important.

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