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A CLINICAL STUDY ON THE MANAGEMENT OF INGUINAL HERNIAS IN CHILDREN AT OUR INSTITUTE:

General Surgery

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ABSTRACT

Background: Inguinal and scrotal swellings are frequently encountered in the surgical practice, especially in children. It is also important to study the factors which are associated with inguinal hernia, especially in children, for its effective management.

Objective: To study the factors which are associated with inguinal hernia in children.

Material and Methods: A retrospective hospital based study was undertaken in the Department of Surgery for a period of one year between September 2016 to November 2017. Children who were aged one day to 12 years were selected for the study. Total 34 patients were enrolled in our study. The details regarding the clinical history and the examination details were collected by using a predesigned proforma. The data which was thus collected was analysed by using the appropriate statistical tests.

Results: The inguinal hernia in the study group was common in the 1-5 years age group. 33 patients were males and only 1 patient was female; a swelling in the inguinal region was the commonest symptom. The swelling of the inguinal hernia was irreducible in 6 cases. The testis was palpable in all cases; a cough impulse was seen and felt in all cases. Tenderness of the swelling was present in 2 cases.

Conclusions: Inguinal hernia is a common congenital condition in children. Herniotomy is the treatment of choice for congenital inguinal hernia.

KEYWORDS

Inguinal hernia, Children, Swelling

Introduction:

Inguinal and scrotal swellings in children are frequently encountered in the surgical practice. Most of these swellings are congenital and they have an asymptomatic presentation. They are related to the descent of the testes and the processus vaginalis [1]. To date, the mechanism of the testicular descent is speculative, with various hypotheses being put forth, the most recent one being that of "WATER-TRAP" which was made by Heyns and Deklerk. The abnormalities in the descent result in ectopic or undescended testes. The undescended testis which is found in more than 90% of the cases, is associated with congenital inguinal hernias [2]. Congenital inguinal hernias are common in infants and children, for which surgery constitutes the most frequent method of treatment in the paediatric age-group. The difficulties which are encountered in paediatric inguinal hernia are operative difficulties which are connected with a thin transparent sac, which is the association with the undescended testis and the different opinions on the timing of the operation when the two conditions co-exist. The swelling in the inguinal region is described by the parent but the surgeon is unable to confirm its presence. Once the diagnosis is definite, the rule is to repair. The other difficulty is whether a contra-lateral exploration should be performed or not, and if so, whether the decision should be based on the site, age or sex. The few other difficulties are in the handling of the total situation in Surgery Section the phenotypic females but karyotypic males, or when the hernial sac contains gonads that are testes; or to evaluate the role of spinal anaesthesia, particularly in premature babies; or the existence of a direct inguinal hernial sac in children; and the failure of the recognition and the repair of the sac, which results in recurrent inguinal hernia [3]. The recent trend is to manage inguinal hernia by herniotomy on a day care basis. Although a laparoscopic hernia repair is conducted in adults, there is little or no indication to use this technique in infants and children. But there are fewer studies which have been done on inguinal hernia in children in our country and in the world. This study was conducted with the aim of finding the factors which were related to inguinal hernia in children.

MATERIALS AND METHODS:

The present retrospective, hospital based study was undertaken in the Department of Surgery, at Dhiraj Hospital, Sumandeep Vidyapeeth, Pipariya, Vadodara, for a period of one year between September 2016 to November 2017. The ages of the children ranged from day one to 12 years and those children who were admitted with inguinal hernia in the paediatric surgical ward were selected for the study. A total of 34 children were admitted to the paediatric surgical ward during the study period with inguinal hernia.

The children who had congenital hydrocele were excluded from the study. The children with signs of obstruction and the risk of incarcerations were definitive indications for surgery, particularly the preterm infants. The congenital inguinal hernias were diagnosed by taking a detailed history from the parents in predesigned forms, followed by clinical examinations, investigations and management. After obtaining the history, the children were examined systematically, which included an examination of the inguinal and the groin regions and the scrotum and its contents. The site, size, variability of the size, reducibility or any underlying straining for micturition and the presence or absence of the testis in the scrotal sac were noted. The respiratory system, the cardiovascular system and the abdomen were examined for any associated congenital anomalies. The children were also subjected to routine investigations of the haemoglobin levels, total laeukocyte count, differential count, bleeding time, clotting time, the routine urine examination and abdominal ultrasound. The female children with hernias were evaluated for the disorders of sexual differentiation in the form of ultrasonography of the abdomen and checking for buccal Barr bodies. After the pre-operative assessment, the affected part was prepared for surgery. The type of surgery was decided, depending upon the age of the child. If the children were of less than one year of age, the Mitchell Banks operation was performed, where herniotomy was done without opening the external oblique aponeurosis. If the children were of more than one year of age, the Ferguson's technique was performed, where herniotomy was done after opening the external oblique aponeurosis. After the surgery, the children were nursed in the post-operative wards with antibiotics. The post operative complications were treated and the children were discharged when they were fit. All the patients were asked to attend the Surgical Outpatients Department for follow-up as and when it was required, between 4 to 6 months.

RESULTS AND DISCUSSION:

Inguinal and scrotal swellings in children form a majority of the surgical conditions which require treatment. Inguinal hernia repair is the most frequently performed operation in the paediatric age group. Studies from various centres have reported an incidence of 3.5 to 5.0% for the inguinal hernias in full term infants and an incidence of 44 to 55% in premature and LBW babies [4,5]. Total 34 patients with inguinal hernias were included in our study. Most of the children belonged to the 1-5 years age group. They were operated in view of the risk of incarcerations. A swelling in the inguinal region was the commonest symptom which was presented by the patient attenders.

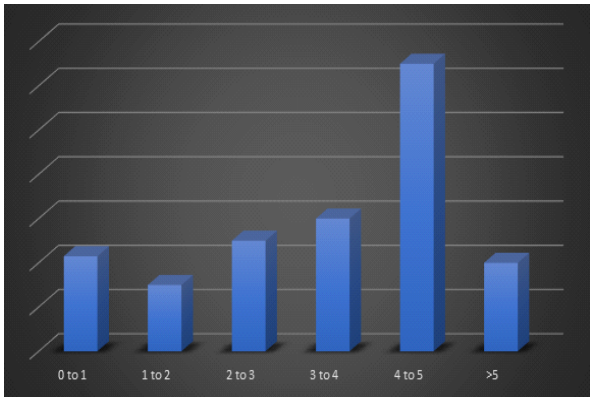
1) Age Distribution:

Most of the patients in our study belonged to age group 4-5 years.

Table:1 Age Distribution:

Age	Patients
0-1 years	3
1-2 years	3
2-3 years	5
3-4 years	6
4-5 years	13
>5 years	4

Figure:1 Age Distribution:



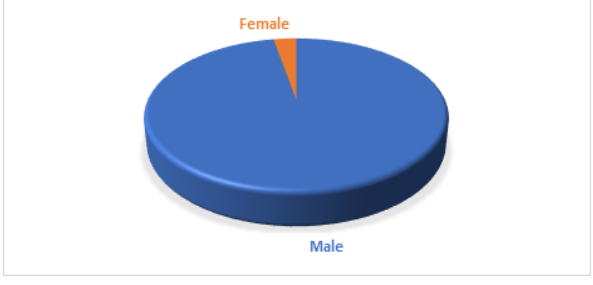
2) Sex Distribution:

33 of them were males and only 1 of them was females. In the study series of Grosfeld [2,3] et al., the male to female ratio was 9:1.

Table:2 Sex Distribution:

Sex	Male	Female
Total	33	1

Figure:2 Sex Distribution:



3) Side of Hernia:

32 patients had right sided hernia, 2 had left sided which is attributed to late decent of testis on right side.

Table:3 Side of Hernia:

Side	Right	Left
Patients	32	2

Figure:3 Side of Hernia:

All the patients after obtaining consent were operated by inguinal approach and open herniotomy. Undescended testis is an anomaly which is commonly associated with congenital inguinal hernias. Scorer and Farrington found that 30.3% of the premature infants had undescended testes, whereas there was only a 3.4% incidence in full term babies and by one year of age, the incidence was approximately 0.8% [6].According to Witherington et al., a patent processus vaginalis with an undescended testis is an undisputed indication for orchidopexy [7]. But in our study none of the patient had undescended testis. All the patients were discharged on day 3 and suture removal was done on day 10-14. Patients were followed for 1-6 months for any recurrence. At present none of the patient had recurrence.

Conclusions:

Inguinal hernia is a common congenital condition in children. Herniotomy is the treatment of choice for congenital inguinal hernia.

References:

[1] Gray SW, Skandalakis J.E. Embryology for Surgeons: W.B. Saunders, Philadelphia. 1972; 417-22.
[2] Grosfeld et al., Inguinal hernia in children – the factors which affected the recurrence in 62 cases. Journal of Paed Surgery. 1991; 265 - 83.
[3] Grosfeld JL. The current concepts in inguinal hernias in infants and children. World Journal of Surgery. 1989; 13(5): 506-15.
[4] Groff D, Nagaraj HS, Pietsch JB. Inguinal hernias in premature infants who were operated on before their discharge from the neonatal intensive care unit. Arch Surgery. 1985; 120: 962.
[5] Grosfeld JL, Minnick K, Shedd F, West KW, Rescorla FJ, Vane DW. Inguinal hernia in children: the factors which affected the recurrence in 62 cases. Journal of Paed Surgery. 1991; 283 – 87.
[6] Scorer CG, Farrington GH. Congenital deformities of the testis and the epididymis. Butterworth. London: 1971; 15-102.
[7] Witherington R. Cryptorchism and the approaches to its surgical management. Surgical Clinics of North America. 64:2 April 84, 367 – 83.