ORIGINAL ARTICLE

PRIMARY HYDROCOELES IN INFANTS AND CHILDREN

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Background: Hydrocoele is an abnormal quantity of serous fluid within the tunica vaginalis. It can be primary or secondary. The primary can in turn be congenital or acquired. Objective of this study was to see the frequency of primary hydrocoeles in children presenting to Ayub Teaching Hospital, Abbottabad. **Methods:** This prospective study was conducted in Surgical 'B' Unit, Ayub Teaching Hospital, Abbottabad, from Feb 2007 to Feb 2009. All Children above 6 months age with hydrocoeles and operated were included in this study. All details were recorded on a proforma. The collected data were analysed, results calculated, and conclusions drawn. **Results:** In all 186 operated cases, the maximum (58, 37%) incidence was in 2–3 years age group. Injury to the vas occurred in 1 (0.7%) case, infection rate was 0% and scrotal haematoma occurred in 18% cases. **Conclusion:** Children with hydrocoeles should be operated after 6 months age. Herniotomy is the only satisfactory treatment and in expert hands complications are very rare.

Keyword: Hydrocoeles, Herniotomy, infants

INTRODUCTION

Hydrocoele is an abnormal quantity of serous fluid within the tunica vaginalis. It can be primary or secondary. The primary can in turn be congenital or acquired. The congenital can be infantile, communicating or vaginal.[1] The infantile variety has an obliterated processus vaginalis but a cord like thing is still there. This in later life pulls the testis up, concerning the patient. The communicating (common) variety has a patent processus vaginalis and so has a diurnal variation in size.

Presentation is usually a swelling in the scrotum causing anxiety to the parents. Sometimes they present with pain, i.e., the child cries and is usually attributed to the swelling. Treatment is transfixation of the neck of the sac at internal ring, dividing the neck and leaving the distal portion open. Surgery is usually undertaken at 6 months of age, as most hydrocoeles will disappear at 6 months and any remaining will not resolve itself.[2]

MATERIAL AND METHODS

This study was conducted in Surgical 'B' Unit, Ayub Teaching Hospital, Abbottabad from 2006 to 2008. In all 186 cases were operated for hydrocoele. All the cases were diagnosed as hydrocoeles by two clinicians, the 2nd being a consultant surgeon. All the children were investigated according to the ward regimen. Perioperative antibiotics, usually a first generation cephalosporin were administered. Simple herniotomy was carried out with drainage of fluid; the distal portion of the sac was left open. All the events were recorded and the data so collected was analysed using SPSS-11

RESULTS

All the children operated were of age 1–10 years and the average age was 4.7 years. The age incidence increased from 1 year to 3 years and then declined. Maximum cases were at 3 years age, i.e., 58 cases (Table-1).

Swelling was presenting symptom in all patients (100%) transillumination test was positive in all patients (100%) while only 72% had a diurnal variation of size. (Table-2). In 63 patients the parents attributed the crying of the child to pain of the swelling and demanded early surgery.

Infection occurred in none of the patients whereas scrotal swelling (Haematoma) was seen in 33 patients. This resolved itself. During surgery while separating the delicate vas from the sac one patient had damage to the vas (Table-3).

Table-1: Age distribution

Age	Patients	Percentage
6 months to 1 year	23	12.37
1–2 years	38	20.43
2–3 years	58	31.18
3–4 years	26	13.97
4–5 years	17	9.14
5–6 years	8	4.32
6–7 years	12	6.45
7–8 years	2	1.07
8–10years	2	1.07
	186	**100**

Table-2: Clinical Presentation

Signs and Symptoms	Numbers	Percentage
Swelling	186	100
Transillumination	186	100
Diurnal variation	133	72
Pain	63	34

Table-3: Complications (n=186)

Complication	Number	Percentage
Infection	0	0
Injury to vas	1	0.54
Scrotal haematoma	33	18.0

DISCUSSION

Almost all the new born boys have a small lax hydrocoele and it usually resolves by 6 months after that it is not usual for it to resolve.[2] We have the

incidence of 12.37% in neonates and increases gradually to 31.18% at age 2 to 3 years. This is in contrast to another study by Smith *et al*[3] quoting figures of 94% in neonates and 57% in children up to 1 year. This is because of the fact that the aforementioned study is a post mortem study in which all the lesions are included which probably would have resolved up to 1 year age. Surgery should only be undertaken after 6 months of age and before that only expectant treatment is advised, awaiting spontaneous fusion of processus vaginalis as non-communicating hydrocoeles are self limiting and usually resolve in 6 to 12 months.[4]

Herniotomy is indicated in all types of primary hydrocoeles in children as even the obliterated processus vaginalis has a cord like structure which pulls the testis cranially in later life giving false impression of un-descended testis.[5]

Regarding complications, injury to vas deferens was seen in 1 patient (0.54%) which is comparable, depicting universality of operation procedure. In the first 5 years of life vas deference is still delicate and can easily be damaged if care is not exercised. We observed scrotal haematoma in 18% of cases however no figures have been reported in literature regarding development of scrotal haematoma.

CONCLUSION

Children with hydrocoeles should be operated after 6 months age and all above 1 year age. Herniotomy is the only satisfactory treatment and in expert hands complications are very rare.

RECOMMENDATIONS

1. Children with hydrocoeles should be operated only after 6 months of age for hope of spontaneous cure.
2. All children above 1 year of age with hydrocoele should be operated. This relieves the symptoms and parent anxiety and has no complications in experienced hands.
3. Primary hydrocoeles in children should only be treated by herniotomy.
4. All precautions should be taken to safeguard the vas.

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