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Original Research Article

Clinical profile of scrotal swellings in Jharkhand, India: our experience of four rural health camps

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ABSTRACT

Background: Scrotal swellings are one of the common problems in all age groups. Since these swellings are usually painless and can attain a very big size without causing much discomfort; the patients are reluctant to seek medical advice. Social stigma, embarrassment and fear of getting under the knife are the other reasons for late presentation. However in developing countries like India; the poverty, illiteracy, unawareness and poor health care facilities are the common reasons for late presentation. The objective of the study was to bring forward the volume of problem and morbidity associated with scrotal swellings in rural populations of Jharkhand, India.
Methods: This study was based on the four health camps with emphasis on scrotal swellings organized in the rural areas East Singhbhum, West Singhbhum and Simdega districts of Jharkhand state in Eastern India between December 2015 and June 2017. Data obtained from these camps were analyzed retrospectively.
Results: A total of 1567 persons were screened for scrotal swellings in four camps; 180 (11.4%) of them found to have some scrotal pathology. Most of the cases were in the age group of 31-50 years (61.35%), scrotal swelling being main complaint. Out of the 180 cases with scrotal swelling, Primary vaginal hydrocoele was found in 78.9% (n=142); followed by sebaceous cyst and epididymal cyst. The majority of cases had symptom duration of 1 to 2 years– 33.9% (n=61), followed by 2 to 5 years– 23.23% (n=42); the duration of symptoms ranged from 2 weeks to 12 years.
Conclusions: Although the diagnosis and treatment of scrotal swellings are relatively simple the number of patients with scrotal swellings is high, especially in the rural areas of developing countries like India. The rural health camps can be effective in decreasing the morbidities of scrotal swellings.

Keywords: Scrotal swellings, Rural health camps, Jharkhand

INTRODUCTION

The scrotal swellings are one of the common problems in all age group and are commonly encountered in surgery OPD. Swellings of scrotum affect the physical well being of the patient and present with varied etiology. Since scrotum is placed outside the lower abdomen they are easily noticed by the patient himself and are also easily accessible for clinical examination by the treating doctor. Most of the scrotal swellings are cystic and the spectrum of disease consists of hydrocoele (commonest cause), haematocoele, pyocoele, chylocoele, spermatocoele, epididymal cysts and sebaceous cysts.

The hydrocoele is an abnormal collection of serous fluid in some part of the processus vaginalis, usually the tunica.[1] It is divided into simple (scrotal) and communicating.[2] Secondary hydrocoele occurs secondary to disease of the testes and epididymis and its management mainly consists of treatment of the underlying cause. Filarial hydrocoele and chylocoele account for 80% of hydrocoele in some tropical countries where the parasite *Wuchereria bancrofti* is endemic. Epididymal cysts represent cystic degeneration of the epididymis.[2] Spermatocoele is a retention cyst arising from either the vasa efferentia of the testes or from the epididymis.[3] The scrotum has abundant quantity of sebaceous glands, which may become infected and obstructed forming sebaceous cysts. Because of the presence of hair follicles, the scrotum is one of the sites for folliculitis (Boils) etc.

Indications for treatment include pain, discomfort and cosmetic purpose.[4] Conventional treatments (for primary hydrocoele, epididymal cyst, and spermatocoele) include repeated aspiration; aspiration and injection of sclerosant or surgery. Aspiration and injection of sclerosant can cause severe pain, and simple aspiration has to be repeated and carries risk of infection and haematoma formation.[5]

The gold standard continues to be surgical extirpation of the cystic lesion.[6] There is no specific treatment for secondary hydrocoele. Management of this condition consists of treatment of the underlying cause. Surgical treatment of idiopathic hydrocoele includes 4 basic techniques– Lord's plication Winkelmann's partial excision and eversion of the sac, Jaboulay's eversion of the sac and Radical excision of the sac.[7-9] Congenital hydrocoele are treated by herniotomy. Treatment of epididymal cyst and spermatocoele consists of the excision of the cysts.[2,3]

The complications during operations on the scrotum are bleeding, injury to the cord structures, torsion of testes due to faulty reposition. The common postoperative complications include haematoma and odema, which can be prevented by meticulous haemostasis and postoperative scrotal support.[10]

Since the cystic swellings of scrotum are usually painless and can attain a very big size without causing much discomfort; the patients are reluctant to seek medical advice. The social stigma and embarrassment and fear of getting under the knife are the other reasons for late presentation. Most of them usually adults seek medical advice only after persistence by their spouses or partners.

However in rural population of Jharkhand, India; the poverty, illiteracy, unawareness and lack of health care centers with surgical facilities are the common reasons for late presentation. Hence awareness and screening camps were organized in these areas and our observations of four such camps are discussed here. The objective of this study is to bring forward the volume of problem and morbidity associated with scrotal swellings in rural areas of Jharkhand, India.

Objectives

- To bring forward the volume of problem and morbidity associated with scrotal swellings in rural populations of Jharkhand, India.
- To study the varied etiology of scrotal swellings and to evaluate their incidence.
- To study the mode of presentation of scrotal swellings.
- To spread awareness about scrotal swellings among rural masses and encourage them to seek early medical advice.

METHODS

This study was based on the four health camps with emphasis on scrotal swellings organized in the rural areas of East Singhbhum, West Singhbhum and Simdega Districts Jharkhand state situated in Eastern India between December 2015 and June 2017. The data obtained from these camps were analyzed retrospectively. Statistical evaluation was performed using the Statistical package for Social Science, version 18.0 (SPSS Inc). The descriptive data of the study was specified with mean, standard deviation, and percentage.

The Jharkhand is one of the filaria endemic states of India with Average Microfilaria rates of 0.36% in the year 2015 and around 75.95 percent live in the villages of rural areas. As most of the rural population is dependent on agriculture and they finish their agriculture related works by December; so the months from December to June was chosen for maximum participation of masses for health camp. Before organization of camps sensitization programs were also held with the help of local volunteers and the people with any scrotal complaints were enrolled for screening. The team for these health camp consisted of two general surgeons and two to four MBBS doctors. The diagnoses done in the camps were purely clinical and all patients diagnosed with some pathology were counselled and advised for definitive treatment.

Inclusion criteria

Inclusion criteria were persons voluntarily participating in the health camps; patients with scrotal swelling or pain of any duration; patients with cystic swellings from the testes and its coverings, epididymis or spermatic cord.

Exclusion criteria

Exclusion criteria were patients with inguinal or inguinoscrotal swelling; patients with necrotizing fasciitis of scrotum; diagnosed cases of testicular malignancy.

RESULTS

Most of the cases screened had no scrotal pathology but 11.4% (n=180) had some scrotal pathology of variable duration. Apart from 180 patients with scrotal swelling, 16 (1.02%) patients with inguinoscrotal swelling were also encountered during screening but were not included in the study (Table 1).

Table 1: No of patents turned up for screening and patients with scrotal swelling.

Camp number	No of persons screened	Patient with scrotal swelling (%)
1	306	43 (14.05)
2	455	52 (11.42)
3	376	38 (10.10)
4	430	47 (10.93)
Total	1567	180 (11.4)

Table 2: Age distribution of patients with scrotal swellings.

Age (years)	No. of cases	Percentage (%)
< 10	4	2.23
10-20	7	3.9
21-30	31	17.23
31-40	51	28.23
41-50	56	31.12
51-60	22	12.23
>60	9	5
Total	180	100

The youngest patient was 7 year old and the oldest was 68 years (38.91±12.46 years). Maximum number of cases was seen in the age group between 31-50; accounting for 61.35% of cases (n=107) (Table 2).

Most of the patients had painless scrotal swelling without affecting their daily activities significantly; but few complained of occasional pain, frequent trauma or difficulty in cycling and coital activities; 3 had associated scrotal filariasis. 16 cases were presented with inguinoscrotal swelling but were not included in the study (Table 3).

Table 3: Presenting features.

Presenting features	No. of cases	Percentage (%)
Scrotal swelling	134	74.45
Scrotal swelling + pain	39	21.67
Pain alone (occasional/on exertion)	7	3.9
Total	180	100

Table 4: Duration of symptoms.

Duration	No. of Cases	Percentage (%)
0 to 6 months	33	18.34
7 to 12 months	32	17.78
1 to 2 years	61	33.9
2 to 5 years	42	23.34
>5 years	12	6.67
Total	180	100

The duration of symptoms ranged from 2 weeks to 12 years. The majority of cases presented in the camp had symptom duration of 1 to 2 years– 33.9% (n=61), followed by 2 to 5 years– 23.23% (n=42); 12 cases (6.67%) had symptoms for more than 5 years (Table 4).

Table 5: Etiology of scrotal swellings.

Etiology	No. of Cases	Percentage (%)
Primary vaginal hydrocoele (PVH)	142	78.9
Spermatocoele /epididymal cyst	14	7.8
Sebaceous cyst	17	9.5
Haematocoele/pyocoele /chylocoele (neagative transillumination test)	7	3.9
Total	180	100

Table 6: Age incidence of specific lesions.

Etiology	Age groups (years)							
	<10	10 -20	21- 30	31-40	41-50	50-60	>60	Total
Primary vaginal hydrocoele	4	6	27	44	43	14	4	142
Spermatocoele/epididymal cyst	0	1	3	4	3	3	0	14
Sebaceous cyst	0	0	1	3	8	3	2	17
Haematocoele/pyocoele/ chylocoele	0	0	0	0	2	2	3	7
Total	4	7	31	51	56	22	9	180

Primary vaginal hydrocoele was the commonest cause accounting for 78.9% (n=142) of all scrotal swellings in the study, followed by epididymal cysts 7.8% (n=14) and sebaceous cysts 7.9% (n=17); 6 cases had multiple sebaceous cysts (Table 5).

The age incidence of primary vaginal hydrocoele was most common in the age group of 31-50; accounting for 61.26% (n=87) followed by age group of 21-30, majority of them were right sided (69%, n=98) and 12.69% (n=18) were bilateral (Table 6).

The age incidence of epididymal cyst was similar in all age groups above 20 years; sebaceous cyst was common in the age group of 41-50 years. Scrotal swelling with negative transillumination test viz. pyocoele, chylocoele were seen in elder age groups.

DISCUSSION

Jharkhand is a state in eastern India. It was carved out of the southern part of Bihar on 15 November 2000. Jharkhand is famous for its rich mineral resources like uranium, mica, bauxite, granite, gold, silver, graphite, magnetite, dolomite, fireclay, quartz, fieldspar, coal (32% of India), Iron, Copper (25% of India) etc. Forests and woodlands occupy more than 29% of the state which is amongst the highest in India.[11] As per 2011 Census, the geographical area of Jharkhand is 79.70 Lakh Hectare with population of 32,988,134 and 32620 villages.[12] Of the total population of Jharkhand state, around 75.95 percent live in the villages of rural areas. In rural areas of Jharkhand, literacy rate for males and female stood at 72.86% and 46.62%. Average literacy rate in Jharkhand for rural areas was 61.11 percent.[13]

The Jharkhand is one of the filaria endemic states of India with Average Microfilaria rates of 0.36% in the year 2015 and scrotal swellings are common problem in this part of India.[14] Although the diagnosis and treatment of scrotal swellings are relatively simple and less complicated the patients with swellings of the scrotum present late. The social stigma and embarrassment are main reasons for late presentation. However in rural areas of Jharkhand; the poverty, illiteracy, unawareness, ignorance and lack of health care centers with surgical facilities are the common reasons for late presentation. The present study is based on the four rural health camps focusing on awareness and screening of scrotal swellings.

A total of 1567 persons were screened for scrotal swellings in four camps and 180 (11.4%) of them found to have some scrotal pathology. Out of the 180 cases with scrotal swelling, primary vaginal hydrocoele was found in 78.9% (n=142); followed by sebaceous cyst and epididymal cyst. Most of the cases with scrotal pathology were in the age group of 31-50 years (61.35%), scrotal swelling being main complaint. The age incidence in our health camp base study was different from the Campbell's study of 502 cases where age incidence was maximum between 20-39 years.[15] In another study conducted by Dandapat et al, of the 500 patients, majority of patient (61%) were in between 20 and 40 years age group.[16]

The majority of cases presented in the camp had symptom duration of 1 to 2 years– 33.9% (n=61), followed by 2 to 5 years– 23.23% (n=42); and the duration of symptoms ranged from 2 weeks to 12 years. This is in contrast to the surgery OPDs in urban areas where most of the patients with scrotal complaints come with symptom duration of less than 6 months.

CONCLUSION

Although the diagnosis and treatment of scrotal swellings are relatively simple and less complicated the number of patients with scrotal swellings is high in communities especially in the rural areas of developing countries like India. The social stigma, ignorance, poverty, fear of getting under knife, lack of awareness and lack of health care facilities in rural areas are the common causes of late presentation.

Hence awareness about scrotal swellings should be spread among the rural populations and they should be encouraged to avail early medical attention. The rural health camps in especially in developing and poor countries can be effective in decreasing the morbidities of scrotal swellings in rural population.

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REFERENCES

1. Fowler C. The Testes and Scrotum. Chapter 79. In: Bailey and Love's Short Practice of Surgery, Norman S Williams, Christopher J K Bulstrode, P Ronan O Connell(eds). 25th Edition, London: Arnold publishers; 2008: 1377-1416.
2. Goldstin M. Surgical Management of Male infertility and other Scrotal disorder. Vol. I. In: Campbell's urology, Patrick C. Walsh, Alan B Retik, Vaughan (eds). 8th edition. Edinburgh: WB Saunders Company; 2002: 313-316.
3. Margaret. Surgery of the Groin and External genitalia. In: Farquharsons's Text book of Operative general surgery, Farquharson M, Morgan B Hodder (eds). 9th edition. Edinburgh: Arnold Publishers; 2004: 474.
4. Ku JH. The Excision, Plication and Internal drainage techniques-a comparison of the results for idiopathic Hydrocoele. British J Urol Int. 2001;87:82-4.
5. Lavelle MA. Surgical treatment of cystic swellings of scrotum under local anaesthesia. England: Annals of Royal College of Surgeons. 1996;78:541-3.
6. Courtney SP, Wightman J. Sclerotherapy for Scrotal cysts using Tetracycline Instillation. Edinburgh: J Royal Coll Surgeons. 1991;36:103-4.
7. Rodriguez WC, Rodriguez DD. The operative treatment for hydrocoele - A comparison of 4 basic techniques. J Urol. 1981;125:804-5.

8. Lord PH. A Bloodless operation for the radical cure of idiopathic hydrocoele. Br J Surg. 1964;51:914-6.
9. Olumi AF, Richie JP. Urologic Surgery. Vol. II. In: Sabiston Textbook of Surgery - The Biological Basis of Modern Surgical Practice, Courtney M Townsend, R.Daniel Beauchamp, B. Mark Evers, Kenneth Mattox L (eds). 18th Edition. Edinburgh W.B. Saunders Company; 2004: 2272-2273.
10. Oesterling JE. Scrotal surgery- A Reliable method for the prevention of postoperative Haematoma and edema. J Urol. 1990;143(6):1201-2.
11. Government of Jharkhand. Official website of the state. Available at http://www.jharkhand.gov.in/web/guest/facts&figures. Accessed on 1 December, 2017.
12. Jharkhand Population Census data 2011. Available at http://www.census2011.co.in/census/state/jharkhand.html. Accessed on 1 December, 2017.
13. Jharkhand Census Report. Available at http://dfp.nic.in/ranchi/Jharkhand%20Census%20Report.pdf Page 4. Accessed on 1 December, 2017.
14. National Vector Borne Disease Control Programme, Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India. Available at http://www.nvbdcp.gov.in/filariasis.html. Accessed on 1 December, 2017.
15. Campbell MF. Hydrocele of tunica vaginalis- Study of 502 cases. SGO. 1927;45:192-200.
16. Dandapat MC, Mohapotro SK, Mohanty SS. The incidence of filaria as an aetiological factor for testicular hydrocele. Br J Surg. 1986;73:77-8.

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