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Epididymal Cyst - A Case Study

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ABSTRACT

Cysts of the epididymis are usually congenital and derived from an embryonic remnant. These cysts are due to cystic degeneration of remnants of the paramesonephric or Mullerian duct and Remnants of the mesonephric duct or Wolffian duct system. Here we report a case of bilateral Epididymal cysts in a middle aged man with a complaint of scrotal lump and infertility since 15 years. He was treated with excision of the cysts under local anaesthesia and had a marked improvement in scrotal discomfort and urgency of micturition after the treatment.

Key words: *Epididymal cysts, infertility, local anaesthesia, Excision of epididymal cysts.*

INTRODUCTION

Cysts of epididymis are usually found in the middle aged and are often bilateral. Children rarely get them before teenage. Men are most likely to develop these cysts around the age of 40. It's hard to give an exact percentage in boys or men who have epididymal cysts because most people who have them don't even know it! But some studies have shown that about 1 in 6 men have them.[1] There are several types of cysts associated with the epididymis. Aetiology of these cysts include cystic degeneration of (a) Remnants of the paramesonephric or Mullerian duct, the appendix of the testis (sessile hydatid of Morgagni). (b) Remnants of the mesonephric duct or Wolffian duct system (i) The paradidymis or organ of Giraldes, this is the most common cause. (ii) Appendix of the epididymis or pedunculated hydatid of Morgagni. (c) The vas aberrans of Haller. Clinically these cysts are situated behind the body of the testis, consist of aggregation of a number of small cysts which feel like bunch of tiny grapes on palpation, often are multiloculated and are filled with crystal clear fluid. Although fluctuation is difficult to elicit, they are brilliantly transilluminant and are finely tessellated due to presence of numerous septa giving an appearance of Chinese lantern.[2] Clinical differentiation from other scrotal swellings like hydrocele, spermatocele and testicular masses is important and presence of bilateral swellings, often being palpable separate from the testis are clinical clues. Although large, epididymal cyst can pose difficulty in differentiating from a hydrocele. Ultrasonography may help to diagnose with certainty.

Often the cysts are small and are asymptomatic and do not require any treatment. Conservative symptomatic treatment is preferred for Small symptomatic cysts as excision may interfere with the export of sperm from the testis. Large cysts causing pain and discomfort need to be excised. Aspiration is useless because the cysts are multilocular.[3]

CASE REPORT

A 45 years old male (IP-124678) visited the OPD of Shalya Tantra with the complaint of scrotal lump with occasional pain and discomfort since 15 years. Patient

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ISSN: 2456-3110 CASE REPORT July-Aug 2018

accidentally noticed a small lump on the left side of the scrotum initially which gradually increased in size over few years causing mild pain and discomfort. After a year he also noticed another lump on the right side of the scrotum. Patient consulted local doctor for the same and was prescribed with oral medications but that did not help him. Over years lumps grew to significant size to cause him discomfort in certain daily activities. From last 2 year he is complaining of increased frequency of micturition. History is significant for infertility 13 years since marriage. Patient gave no h/o Diabetes, Hypertension, previous surgery and there was no complaint of recurrent episodes of fever, lymph node enlargement, burning micturition and hematuria. His earlier semen analysis revealed azoospermia. His systemic examination was unremarkable and findings on local examination of the scrotum are;

Local Examination

Inspection	
Skin and subcutaneous tissue	Loss of normal rugosity of scrotal skin
Swelling	bilaterally symmetrical
Impulse on coughing	Absent.
Palpation	
Get above the swelling	possible on both the sides
Temperature	Normal temperature
Tenderness	No tenderness
Size	Length - 8cm, Circumference 15cm
Shape	Oval
Fluctuation	Present
Translucency	Translucent
Reducibility	Irreducible.
Impulse on coughing	No impulse on coughing
Testis	Not separately palpable
Epididymis	Not felt
Lymph nodes	Not palpable

As differential diagnosis Hydrocele, epididymalcysts, scrotal lipoma, testicular tumours were considered. A positive fluctuation test, ability to get above the swelling, presence of transillumination and non palpability of testis separately were considered and a clinical diagnosis of bilateral hydrocele was made and patient was convinced for surgery. His preoperative investigations revealed no abnormality and surgery was planned under Local anaesthesia with intravenous sedation. Consent obtained.

Investigations

Semen Analysis (25/08/2006)
Colour : whitish
Nature : viscous
Reaction : alkaline
Liquefication : even 2 hours of emission
Volume : 0.8ml
Pus cells : 2-4 hpf
Few non motile spermatozoa seen.

The extra testicular masses described in the literature are,

An Inguinal Hernia

Is a common paratesticular swelling. In some cases, hernia may manifest as hard, irreducible mass, clinically indistinguishable from a primary scrotal mass. Hernia with just omentum can be more difficult to diagnose because their appearance overlaps that of other echogenic masses, particularly lipomas. Lipoma tends to be more well defined masses, where as herniated omentum appears more elongated and should be traceable back to inguinal area. Scanning along the inguinal canal as well as scrotum is necessary to make the diagnosis.[4],[5],[6],[7]

Scrotal calculi

Also known as scrotoliths or scrotal pearls, are free floating calcification with in tunica vaginalis. They may result from inflammatory deposits on tunica vaginalis

ISSN: 2456-3110 CASE REPORT July-Aug 2018

that have separated from the lining. These are often associated with hydroceles and repeated micro trauma may be risk factor for their development.[8]

Lipoma

Are the most common para testicular neoplasms. Most frequently originates from spermatic cord and accounts half of all cord tumors and they can occur at other places in the scrotum. Lipoma can range from microscopic to 3.5 kgs with no specific age prediction.[9],[10]

A Fibrous pseudotumors

Is a lesion called by a host of names, including fibroma, fibrous proliferation of tunica, chronic periorchitis, non specific paratesticular fibrosis, granulomatous periorchitis, nodular fibropseudo tumor, reactive periorchitis, inflammatory pseudo tumor and scrotal mouse. These are non neoplastic but benign fibro inflammatory reaction resulting in one or more nodules and most commonly involving tunica vaginalis. Patients usually present with painless scrotal masses, but they often have the history of previous infection or trauma.[10]

Adenoid tumor

Is the most frequent epididymal tumor and accounts of approximately 30% of all para testicular neoplasms, followed by lipoma.[10]

Polyorchidism

Is rare condition results from abnormal embryonical division of the genital ridge. Approximately 75% cases are intra scrotal and patient most often presents as painless scrotal mass. Remaining 20% of the testis are inguinal and 5% retroperitonial. These are more mobile and are at risk of torsion and increased prevalence of carcinoma.[11],[12],[13]

METHODS

Operative procedure

Pre-operative preparation

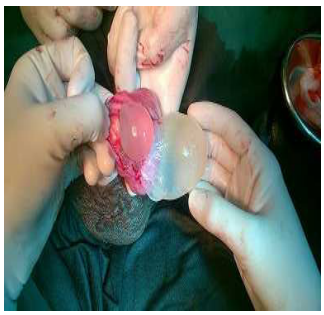
Patient was advised Nil by mouth 6 hrs before the procedure, soap water enema given 3 hrs priorly, part prepared. Written consent, Inj. T.T (0.5ml) IM, Lignocaine intradermal test dose, inj Monocef 1gm IV 1 hour before surgery, Inj Atropine 1 amp s/c 45 min before procedure given.

Anesthesia: Under local anesthesia with Lignocaine with adrenaline 1% and IV sedation with Diazepam 5mg and Pentazocine 15mg.

Procedure: 16/09/2017

Patient was given supine position. Part prepped and draped. Local infiltration of anaesthesia done along the line of incision. A vertical paramedian scrotal incision was made on the right hemiscrotum. Incision deepened, along the scrotal layers until the whitish cystic wall appeared. At this stage needle aspiration of the fluid tried before making a stab incision into the lump and few milliliters of clear fluid was aspirated. This created doubt about the diagnosis of hydrocele and possibility of epididymis cyst was considered. The lump was dissected from all around and multiple variable sized cysts with loculations were dissected. One of these cysts was large to occupy almost whole of the scrotum. Dissecting along the plane of the cyst helped to remove the lump in entirety. Feeding vessels near the epididymis were ligated with 2'0 vicryl. Testis was of normal size and contour and hence repositioned in the scrotum. Hemostasis confirmed and incision closed in layers without a drain. Same procedure was carried out on the other side of the scrotum which also had epididymal cyst. Scrotal bandage applied and patient shifted to the post operative ward.

Fig. 1.1: Removal of Epididymal cyst



Post-operative

Patient was allowed orally with sips of fluids after 3hrs followed by normal diet. Inj Monocef 1 gm IV bd 12th hourly for 3 days, one dose of Jonac suppository given

ISSN: 2456-3110 CASE REPORT July-Aug 2018

followed by Tab. Kaishora Guggulu 1 tds, Tab. Gandhaka Rasayana 1 tds, Asnadi Kwatha ½ glass bd for 7days. Post operative recovery was uneventful and sutures removed on 7th PO day. Follow up was done once a week with good healing of the scar. Out of interest seminal analysis was done after 3 months. However, it did not show any improvement in the count after surgery.

Fig. 1.2: Post operative recovery

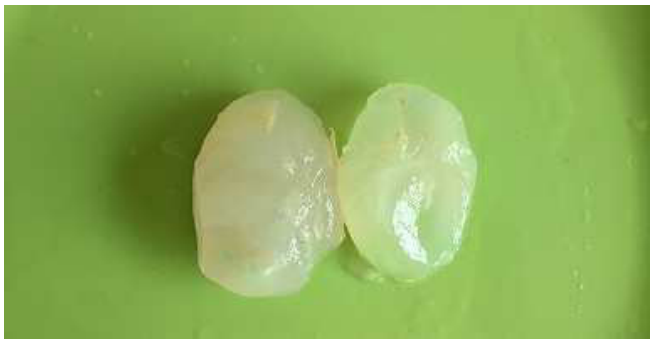
Semen Analysis (18/12/2017)
nColour : whitish
Nature : viscous
Reaction : alkaline
Liquefication : within 30 min of collection
Volume : 2.5 ml
RBC`S : 0-1/HPF
Pus cells : 1-2/hpf
Sperm count : no spermatozoa seen

DISCUSSION

Unilateral epididymal cysts are common and occur at all ages. They are fluid filled small cysts arising from the outflow duct of the testis (the epididymis). Sometimes they cause acute scrotum in children.[14] They are most often felt as a pea-sized swelling at the top of the testis. Most epididymal cysts involute with time.[15],[16] Rarely they attain larger size and when present cause confusion with the diagnosis of hydrocele. This patient had significantly large sized bilateral epididymal cysts covering the testis on both sides giving the impression of a hydrocele. Presence of transillumination test also was in favor of the diagnosis of a hydrocele. Hence hydrocele being the commonest disease causing scrotal lump, clinical diagnosis of hydrocele was done also keeping in mind about other differential diagnosis especially epididymal cyst. However during surgery it was found to be bilateral epididymal cysts. In selected cases, surgery is indicated as the treatment of cystic swellings of the scrotum. In small epididymal cysts surgery is not advised as it may compromise sperm conduction mechanism. However when epididymal cysts are large and causing discomfort, surgery has definite role. In this case the patient was infertile with 2 pre surgical seminal analysis revealing azoospermia, hence removal of epididymal cysts could be justified. However it was also observed that even after 3 months of surgery no improvement was seen in seminal analysis. He was given the option of undergoing *Virechana* and *Vajeekarana* treatment to see if something could be done to improve the seminal count, which patient postponed to a later date.

The clinical description of epididymal cysts are well documented in Ayurvedic treatises especially *Sushrutha Samhitha* in the chapter *Vriddhi* (scrotal lumps) and treatment advised is excision. The appearance of the lump is compared with the *Talaphala* (Toddy Palm fruit i.e. *Borassus flabellifer*) which in reality exactly resembles the fruit. (fig. 1.3).[17]

Fig. 1.3: Scrotal lumps resembling *Talaphala*.



ISSN: 2456-3110 CASE REPORT July-Aug 2018

Conclusion

Epididymal cysts growing to large size in the scrotum is rare. When large, diagnosis may be made as Hydrocele which is common and has similar clinical presentation. Ultrasonogram of the scrotum helps to make the definitive diagnosis. Medical treatment options are the first line therapy for mild symptomatic cases. Epididymal cysts are treated surgically when they cause symptoms like acute scrotum, scrotal and/or inguinal pain. Primary excision is performed to remove cysts.[16] Removal of the cyst may not improve the seminal count in previously azoospermic patients.

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