

Testicular Abscess: Findings of A Study on Eight Patients

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Abstract

Testicular abscess is a rare surgical entity scrotal region. E Coli is the commonest causative organism. A total number of eight cases of testicular abscesses had been reviewed for a period of one year.

It was seen that, the cases mainly present with complaint of acute scrotum with discharging pus. Mean age of the patients under study is around 45 yrs. Ultrasonography used for diagnosis.

It was found that identifying bacterial pathogens are found in eight cases. E coli were found to be the commonest pathogen in culture isolate.

One patient of testicular abscess; pus culture revealed AFB to be causative bacteria. Only a single case of acute testicular abscess was found to have seropositivity for Hbsag. broad spectrum antibiotics were used as mainstay of treatment.

Keywords: Scrotal Region; Orchiectomy; Testicular Abscess; Ultrasonography; AFB.

Introduction

Testicular abscess is a rare surgical entity scrotal region¹. It is generally preceded by epididymo-orchitis. The causative organism is identified in 80% of patients and varies according to the age of the patient. coliforms (E.Coli) are considered to be commonest pathogen while in sexually active age group, C.Trachomatis is the commonest bacteria identified. A multitude of other factors causing testicular abscess

are also identified namely viral infections, testicular trauma, chemicals, secondary to brachytherapy to prostate and rarely following ruptured appendicitis [2], immune compromised patients, testicular abscess may result from tuberculosis [3,4]. Symptoms of testicular abscess usually include testicular pain, swelling and scrotal with a palpable mass on examination. Ultrasound is particularly helpful in making the diagnosis with a hyperemic rim [2,5].

Treatment of testicular abscess consists of appropriate antibiotics alone or with surgical drainage if necessary [6]. Uncommonly, severe cases may necessitate orchiectomy [7].

Cases

Between 2016 and 2017, five cases of acute scrotum were undergone ultrasonography. Four of them were diagnosed to have testicular abscess. The remaining one had heterogenous lesion in testis. all cases were admitted, treated with antibiotics as appropriate and drainage of pus. Postoperatively they failed to respond to conservative treatment as projected from their clinical status and laboratory results even after 5 days and decision of orchidectomy was taken. Following orchidectomy all of them responded positively and was discharged at period of 16 days.

Patient who had haematocele of testis was treated with antibiotic, other accessory medications and measures as appropriate. But patient is having fever and TLC were raised after 48 hours was undergone orchidectomy. During orchidectomy his testis was found to have filled with thick pus and. He responded quickly postoperatively and was discharged on 8th postoperative day.

Two cases presented with acute scrotum with sonologically diagnosed Hypoechoic lesion in testis

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and reduced blood flow in Doppler. All of them were treated epididymoorchitis and urinary tract infection with antibiotics for four weeks. Among these two patients one was previously diagnosed to be seropositive for hepatitis; another had a history of undergoing catheterization by local doctor for treating acute retention of urine. Exploration of scrotum was undertaken in both cases and orchidectomy was done as there was no viable testicular tissue.

One patient were presented with a discharging sinus of scrotum draining plenty of pus with protruding testicular soft tissue through the opening of the sinus and were treated with orchidectomy. Pus culture came AFB for this patient regimen for tuberculosis were started.



Results

In our study period thus total 08 patients of testicular abscess were treated with orchidectomy were studied.

Among these, 5 patients were suffering from acute testicular abscess and 3 from testicular abscess with cause was there(secondary). Clinical records, factors of all the patients were reviewed.

Table 1:

Cause	Number
Epididymoorchitis	5
infected haematocele	1
Postinstrumentation	1
tuberculosis	1

Table 2: Growth pattern in pus from patients of testicular abscess (n=8)

Cause	Number
E coli -4	4
Streptococcus -1	1
Pseudomonas-1	1
Acid fast bacillus -2	2
No growth 0	0

And also the results of microbiological examination and culture sensitivity reports of the pus. Routinely all orchidectomy specimen were sent for histopathological examination.

Mean age of the patients under study is 50 yrs (range - 25 - 70 yrs) while the mean age of patients presented with testicular abscess and (Secondary) testicular abscess with cause are 45 (range25 - 60)and 55 yrs (range - 40 - 70yrs) respectively.

Regarding growth pattern of pus it is found that identifying bacterial pathogens are found in 65% of cases where as no growth is observed in 35% of cases. In the former E coli is found to be the commonest bacteria in culture isolate.

50% of the patients of testicular abscess with causes (secondary) and 28.56% of testicular abscess showed no growth in their culture isolate.

Two patient of testicular abscess, one who was started on treatment for pulmonary tuberculosis; pus culture revealed AFB to be causative bacteria. One patient with discharging sinus came to be positive for AFB.

Only a single case of acute testicular abscess was found to have seropositivity for hbsag, his pus culture was notably negative for any bacterial pathogen.

Discussion

Incidence rate of testicular abscess is less than 1 per 1000 male per year. Inguinoscrotal composite unit has been divided into four surgical zones by S Khan et al [1] for better description of disease processes of the inguinoscrotal region. Testicular abscess is a rare surgical disorder of zone III that may present with acute scrotum.

Testicular abscess is usually occurred as a consequence of unresolved epididymo-orchitis in which the causative pathogen infects the testis and it's covering by retrograde path via vas deferens. It may reach the testis via haematogenous route. A number of other causes of testicular abscess are also identified viral infections, testicular trauma, chemicals, secondary to brachytherapy to prostate and rarely following ruptured appendicitis [3].

Classification of Primary and Secondary testicular abscess in our study population is done depending on clinical presentation of the disease process.

Most of the patients with testicular abscess presented with acute scrotum and required prompt surgical intervention. On the secondary testicular abscess lacks symptoms or signs of acuteness. They fail to resolve completely on initial incision and drainage of acute testicular abscess. Initially their signs and symptoms resolved but eventually they land up in primary.

Testicular abscess is treated by appropriate antibiotics alone or with surgical drainage if necessary [6].

If a conservative approach is attempted then serial ultrasound examinations should be performed to ensure that the abscess does not progress [7].

In our series we have found that commonest cause of testicular abscess is epididymo-orchitis but the commonest isolate from the pus is EColi [8].

However this result corroborates with the experience of Granados Loarca et al [6].

Difference of age distribution of our series with those of the different trials could be due to use of effective treatment at diagnosis, use of effective new generation broad spectrum antibiotics and may be as a result of sample selection. Secondary testicular abscess has more chance to be negative in culture result although in this small series of cases no statistical association could be proved.

Conclusion

Testicular abscess is most commonly resulted following epididymo-orchitis where the infection spread to involve the testis. Classification of testicular

abscess that we have used in our study is an arbitrary one. However from treatment purpose its significance could be portrayed as a primary testicular abscess requires orchidectomy when it is severe enough. On the hand secondary testicular abscess more often demands orchidectomy as in most of the cases no viable testicular tissue remained left.

We have studied the disease process and found that the mean age of presentation of testicular abscess are more than what is said in classical teaching. However we recommend a more detailed study of the disease.

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