



Assessment of histopathology of tumours and tumour like lesions of testis

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Abstract

Clinical data, operative findings and gross features of lesions may provide important and at times decisive diagnostic clues. The present study is undertaken to study the diverse histopathological patterns of testicular lesions and thus offering a specific diagnosis which is of paramount clinical significance.

The study was planned in IGIMS in Department of Pathology in 50 patients. The aim of the study is to know the diverse histopathological patterns of testicular lesions. All the specimens of testicular tumours and tumour like lesions were reviewed and their diagnosis made. Testicular specimens received in the department of pathology. Inclusion criteria includes the specimens with macroscopically microscopically detected tumours and tumour like lesions of testis mentioned in the WHO classification, referred from histological typing of testis tumour.

It is concluded that, despite new techniques in imaging and tumor marker assay the diagnosis of testicular lesion is primarily dependent on histopathological examination. Tumor and tumor like lesions of testis have similar presentations in the form of scrotal swelling and pain.

Keywords: testis, tumors, tumor like lesions, etc.

Introduction

The differential diagnosis of intrascrotal pathology includes a myriad of benign and malignant entities. Timely detection is imperative to reduce the morbidity associated with many of these disease processes. Inflammatory intrascrotal disorders (eg, epididymitis, orchitis, and testicular or appendiceal torsion) are rarely fatal but can lead to sepsis, testicular loss, and decreased fertility if treatment is delayed. Similarly, diagnosis of testicular cancer when it is organ-confined lessens the morbidity associated with disease progression and attendant treatments. Patients who present with intrascrotal pathology usually-but not always-have subjective complaints. Most inflammatory lesions produce scrotal and/or groin discomfort and pain. Patients with associated urinary tract or urethral infections often complain of dysuria or urethral pain. Some patients, however, offer no complaint and present with an asymptomatic intrascrotal mass that is either self-discovered or palpated by a physician during the course of a routine physical examination^[1].

When you evaluate a patient with intrascrotal pathology, one of the most important clinical determinations is, "Is the lesion malignant or inflammatory?" In this article, we sort through the differential diagnosis and highlight the key findings in the physical, laboratory, and radiographic examinations. Most patients who have testicular cancer present with a painless mass within the testis (Case 1). Some patients may complain of a sensation of "heaviness" in the affected testis. Testicular tenderness is rare unless there has been necrosis or haemorrhage within the tumor, which is particularly unusual in patients who have a pure seminoma.^[2]

The mass is usually readily palpable and is commonly firmer than the remainder of the testis. Palpation reveals a normal epididymis posterior to the testis. In patients who have disseminated disease, retroperitoneal and/or supraclavicular adenopathy may occasionally be found.

Scrotal sonography often confirms the diagnosis. Most testicular tumors are distinguished by their heterogeneous characteristics compared with normal tissue. Non-germ cell testicular tumors, such as Sertoli cell tumors, Leydig cell tumors, and gonadoblastoma, occur infrequently and are difficult to distinguish from the more common malignant tumors. Paratesticular (spermatic cord) sarcomas are uncommon, but they are included in the differential diagnosis if a firm lesion is palpably outside the testis and epididymis.^[3] Patients who have orchitis present with testicular pain and often have ipsilateral swelling and tenderness. The inflammation is usually unilateral and frequently secondary to the mumps and Coxsackievirus infections.

Histologic classification of these tumors is complex, and includes seminomas, choriocarcinoma, and a variety of teratomas, or germ cell tumors. Most palpable testicular tumors in adults are malignant, although 80 percent of nonpalpable testicular lesions are benign.^[4] Children with testicular tumors are more likely to have benign lesions, with 20 to 40 percent being benign.^[5] On examination, the testis is enlarged, nontender, has a firm consistency, and does not transilluminate. In seminomas, the testicular surface is smooth and the consistency is uniform, whereas teratomas may be more irregular. Urgent evaluation and referral are indicated.^[6] Most torsions occur during sleep, with scrotal trauma

accounting for less than 10 percent of cases. [7] Patients typically present with sudden onset of painful testicular swelling. The pain radiates to the inguinal and hypogastric areas and may be accompanied by nausea and vomiting. The testis will be tender and swollen, and is often high in the scrotum because of shortening of the spermatic cord with torsion. The position of the epididymis varies depending on the degree of rotation, but will be in the normal posterior position with 360° rotation. The cremasteric reflex is usually absent, and elevation of the testes may aggravate the pain. Suspected torsion is a surgical emergency; the testicular salvage rate for detorsion is 90 percent if performed within six hours of symptom onset, but drops to 50 percent after 12 hours, and to only 10 percent after 24 hours. [8]

The presentation of torsion of the appendix testis may be identical to that of testicular torsion. On physical examination, however, a hard, tender nodule at the superior aspect of the testis may be palpated just beneath the skin, often with a bluish discoloration (i.e., the blue dot sign).

Clinical data, operative findings and gross features of lesions may provide important and at times decisive diagnostic clues. The present study is undertaken to study the diverse histopathological patterns of testicular lesions and thus offering a specific diagnosis which is of paramount clinical significance.

Methodology

The study was planned in IGIMS in Department of Pathology in 50 patients between January 2016 to January 2017. The aim of the study is to know the diverse Histopathological patterns of testicular lesions. All the specimens of testicular tumours and tumour like lesions were reviewed and their diagnosis made. Testicular specimens received in the department of pathology. Inclusion criteria includes the specimens with macroscopically microscopically detected tumours and tumour like lesions of testis mentioned in the WHO classification, referred from histological typing of testis tumour.

The approval of Intuitional Ethical Committee was taken prior to conduct of this study. All the patients enrolled into the study were informed consents.

Results & Discussion

The data from the 50 cases were collected and presented as below. The data was collected to know the diverse Histopathological patterns of testicular lesions. Lesions. All the specimens of testicular tumours and tumour like lesions were reviewed and the data was presented as below.

From the Table 1 it can be concluded that the three are 10 cases of Tumours and 40 cases of Tumor like lesions.

Table 1: Distribution of patients according to age group

Age Group	Tumours	Tumour like Lesions	Total
10-20 years	1	5	6
21-30 years	2	3	5
31-40 years	3	8	11
41-50 years	1	5	6
51-60 years	0	9	9
61-70 years	3	10	13
Total	10	40	50

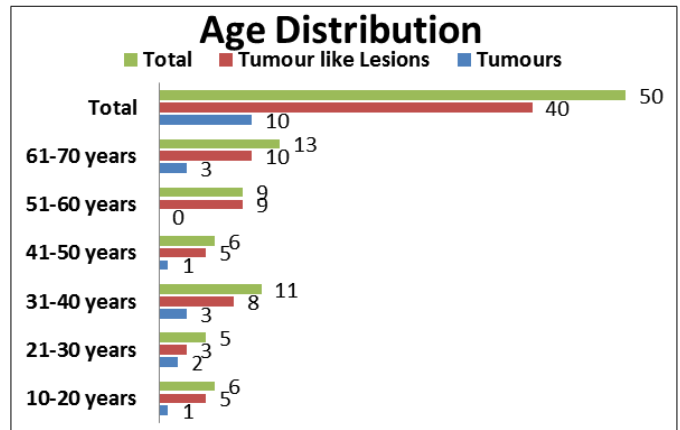


Fig 1

Table 2: Comparative analysis of incidence of various histological types of testicular tumours

Study Group	Dixon and Moore	Deotra A et al	Thota R	Present study
No. of Cases	900	100	36	50
Seminoma% Cases	34	34	31.7	40
Yolk Sac Tumor% Cases	--	7	13.9	5
Teratoma% Cases	10.2	7	13.9	10
Germ Cell Tumors%	31.10	23.00	19.40	33
Lymphoma%	--	1.00	2.8	2

Patients with testicular lesions presented with varied symptoms accounting testicular swelling, fever, lower abdominal lump and other vague symptoms. Majority of patients were found to be complaining about testicular swelling.

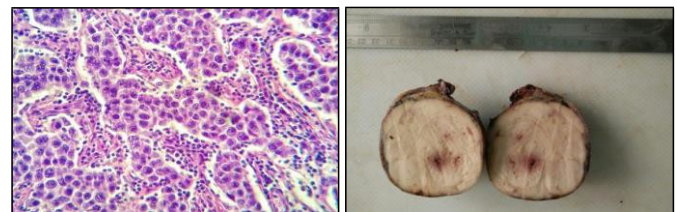


Fig 1: showing gross and microscopic features of seminoma testes

Mostofi and Price (1973) observed more than one histological pattern in about 40% of testicular tumours of germ cell origin [9]. Reddy et al [10] reported an incidence of 4.23% and Pratap VK et al [11] 1.48%. The present study accounted 33% which is in close agreement with that observed by Dixon and Moore [12] (31.1%), Deotra A, et al [13] (23.0%). Seminoma is the commonest histological type encountered in this study as 40%. This is in close agreement with that observed by Dixon and Moore (34%), Deotra A et al (34%), Thota R. et al (31.7%). The gross and microscopic findings in the present study are essentially similar to those reported by other authors. Cellular features of anaplastic seminoma was seen in 1 case which is in close agreement to that observed by Gupta VP et al [14] (03.9%). One case of Yolk Sac Tumour was observed in the present study, accounting for 5% of all testicular tumours. This is in close agreement with that observed by Deotra A. et al (07%). Pratap VK et al noted a higher incidence of 11.97%

in their series. In the present study 2 cases of immature teratoma, were seen, accounting for 10% of all testicular tumours. This is in close agreement with that observed by Dixon and Moore (10.20%) and Thota R. ^[15] (13.90%).

Tumor marker study is important for clinical significance, diagnosis and management of germ cell tumors. Various authors studied the incidence of benign and malignant lesions, which were compared with the present study. In present study malignant lesions constituted 80% and benign lesions constituted 20% which are almost equal to the earlier studies, which is comparable with the earlier studies.

Conclusion

It is concluded that, despite new techniques in imaging and Tumor marker assay the diagnosis of testicular lesion is primarily dependent on Histopathological examination. Tumor and tumor like lesions of testis have similar presentations in the form of scrotal swelling and pain.

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