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Histopathological Study of Testicular Lesions

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ABSTRACT

Aim and Objectives: The aim of this study is to determine the histopathological pattern, and clinical presentations of testicular lesions.

Materials and Methods: This is a retrospective study of 1 year period from January 2020 to December 2020. Total 60 cases have been studied and analysed descriptively.

Results: Out of 60 cases 54 were non-neoplastic and 6 were neoplastic lesions. Non- specific Epididymoorchitis is the most common non-neoplastic lesion followed by testicular Abscess. seminomatous mixed germ cell tumor is the most common malignant tumor followed by seminoma.

Conclusion: Among testicular lesions majorities are non-neoplastic and diagnosis mainly depend on histopathological examination.

Key words: Testicular lesions, Spectrum, Non-neoplastic and Neoplastic.

I. INTRODUCTION

Normal adult testis is a paired organ that lies within the scrotum suspended by spermatic cord [1]. Testis is affected by various non-neoplastic and neoplastic diseases at various stages of life.Non-neoplastic lesions are more common compared to neoplastic lesions. Non-neoplastic lesions include inflammatory lesions like acute and chronic Epididymoorchitis, vascular lesions like torsion of testis, atrophy with maturation arrest of spermatogenesis. Cryptorchidism, otherwise known as undescended testes is one of the congenital malformations seen approximately in 1% of one year old boys [2].Torsion of testis is a surgical emergency.Testicular tumors are rare and account for <1% of all malignancies, found in 15-35 years.(3)Testicular carcinoma follows a reverse pattern to most cancers with decreasing incidence rate with increasing age.(4)and Incidence of testicular cancers is rising in western countries for the past 50 years [5,6].Clinically patients present with scrotal swelling with or without pain, fever and empty scrotum. Testicular cancers Nusually present with painless unilateral scrotal swelling. Despite the all the modalities of diagnosis histopathology plays an important role in accurate diagnosis and help in accurate treatment of the patient.

II. MATERIALS &METHODS

- This is 1 year period retrospective study including all the testicular specimens referred to Department of Pathology, civil hospital Ahmedabad, Gujarat from January 2020 to December 2020. Total 60 cases were taken.
- Tissue samples of the testes received for pathological examination include testicular biopsies, unilateral and bilateral orchidectomy specimens.
- In my study I have excluded the specimens with prostatic carcinoma with prophylactic orchidectomy having normal testis histopathologically.
- Thorough Gross examination was carried out. Formalin fixed, paraffin embedded sections were prepared and slides were routinely stained with H & E and special stains applied wherever necessary.

III. RESULTS

- Non-neoplastic lesions were seen among all age groups, but majority were found in 21-30 years of age group andNeoplastic lesions were seen among 21-50 years of age.
- Most common symptom was scrotal swelling followed by scrotal pain, fever, abdominal pain and sometimes abdominal lump, weight loss and anorexia.
- Out of 60 cases 54 were non-neoplastic and 6 were neoplastic lesions of testes.
- Among non-neoplastic lesions 49 cases were unilateral & 5 cases were bilateral.

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- Among neoplastic lesions, all 6 cases were found to have unilateral involvement
- Out of 6 neoplastic lesions, 5 cases were malignant neoplasm which includes 3 cases of Mixed Germ Cell tumor and 2 cases of seminoma.

Table-1:Histopathological Diagnosis of Non Neoplastic Testicular lesions

Total of 60 cases studied over a period of 1yrs. Out of 60 cases 54 were non-neoplastic and 6 cases were neoplastic accounting for 90 % &10 % respectively. Acute and chronic non-specific Epididymo-orchitisis the most common non-neoplastic lesion together 20 cases accounting for 37.0% followed by testicular abscess with maturation arrest of spermatogenesis, 14 cases accounting for 25.9%. Testicular Torsion with haemorrhagic infarction constituted 16.6% with 9 cases. Next followed by cryptorchidism only 4 cases accounting for 7.4%. (Table:1)

Serial No.	Histological Diagnosis No	No. of cases	Percentage(%)
1	Undescended testis	4	7.4
2	Ectopic Testis	1	1.8
3	Testicular Atrophy	3	5.5
4	Testicular Torsion	9	16.6
5	Testicular Abscess	14	25.9
6	Non specific epididymo-orchitis	20	37
7	Tuberculous epididymo-orchitis	3	5.5
	Total	54	100

TABLE-3. HISTOPATHOLOGICAL DIAGNOSIS OF NEOPLASTIC TESTICULAR LESIONS

Among all tumors mixed Germ cell tumor was most common 3 cases out of 6 cases 50%, followed by classic seminoma 1 cases with 16.6%, spermatocytic seminoma 1 cases constituted 16.6% of all tumors. Mature Teratoma 1 cases with 16.6%, (table: 2)

Serial No.	Histological Diagnosis	No. of cases	Percentage
1	Benign		
	Mature Teratoma	1	16.6%
2	Malignant		
	Seminoma		
	Classical Seminoma	1	16.6%
	Spermatocytic Seminoma	1	16.6%
	Mixed Germ Cell Tumor	3	50%
	Total	6	100%

Table-4: Laterality of the specimens

Majority of cases presented with right sided involvement, 31 cases constituting 51.66%. Left sided involvement was in 18 cases accounting for 30.00%. Remaining cases 11 presented with bilateral involvement 18.33% (Table:3)

Laterality of Specimens	**Number**	**Percentage**
Right sided	31	51.66%
Left sided	18	30.00%
Bilateral	11	18.33%
Total	**60**	**100%**

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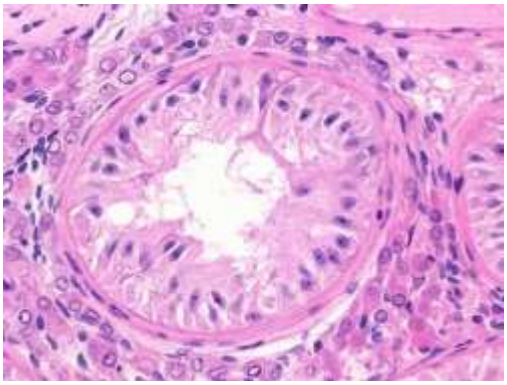
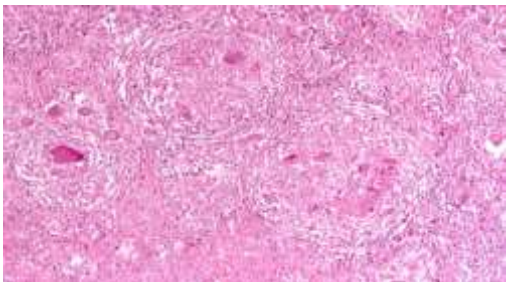
Microscopy

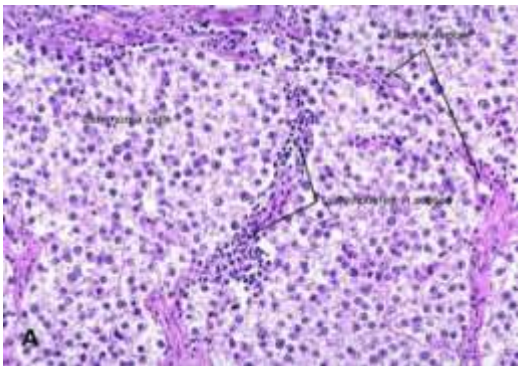


Testicular atrophy in Undescended Testis: Tubules show Sertoli cells but no Spermatogenesis

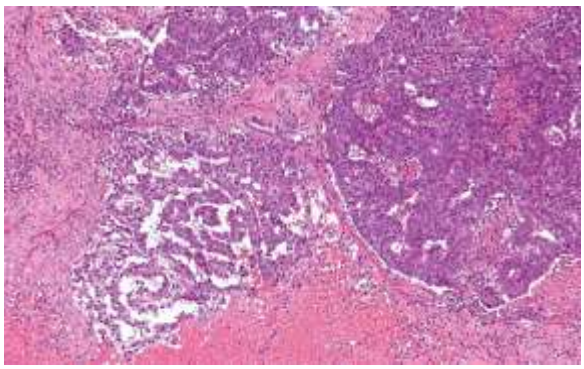


Caseating and non-caseating granulomas containing giant cells are seen

SEMINOMA



Nest of tumour cells which have pale cytoplasm and large nuclei (*****) with intervening thin fibrous septa .



The intermediate magnification image show both yolk sac tumour (left of image) and embryonal carcinoma (right of image).

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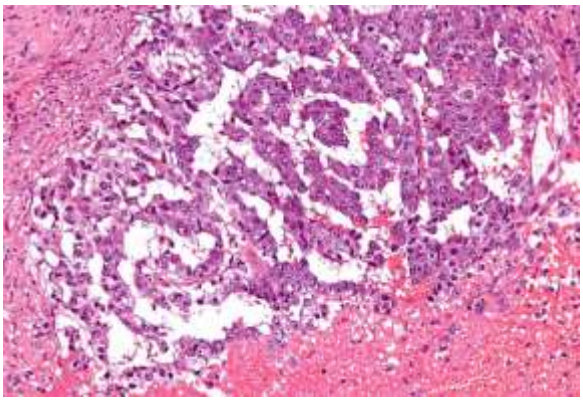

The higher magnification images show only yolk sac tumour.

IV. DISCUSSION

- In my study out of 60 cases, 54 were Non neoplastic and 6 were Neoplastic.
- Comparative analysis was done with various other studies and present study.
- In my study, total 54 cases of Non Neoplastic Testicular lesions were studied and most common lesion is non -specific epididymo-orchitis (37%) which is quite similar to the study done by Abba K et al[7].
- Testicular abscess and undescended testis are also common in my study which is comparable with study done by Patel MB et al[4] and Reddy H et al[8].

Comparison of percentage incidence of benign and malignant lesions

V. CONCLUSION

Majority of testicular lesions are non- neoplastic.
Early intervention is useful to decrease morbidity and mortality.
Our study concludes that diagnosis of testicular lesions is primarily dependent upon histopathological examination.

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