



HISTOMORPHOLOGICAL STUDY OF ORCHIDECTOMY SPECIMENS

Pathology

Dr. Natarajan Suresh

Associate Professor, Department of Pathology, Sree Balaji Medical college and Hospital No;7, CLC Work's road, Chromepet, Chennai-44

Dr. Josephine. A*

Associate Professor, Department of Pathology, Sree Balaji Medical college and Hospital No;7, CLC Work's road. Chromepet, Chennai-44 *Corresponding Author

ABSTRACT

Orchidectomy specimens constitute significant proportion of cases in histopathology labs. Most of the cases are of non neoplastic in nature and wide range of age group is affected. Testicular neoplasms account for 1-2% of all malignant tumors and is one of the most common malignancy in men. The aim of the current study is to study the histomorphological features of orchidectomy specimens in a tertiary care hospital.

Materials and methods: A total of fifty two orchidectomy specimens received in the department of pathology in a tertiary care centre between June 2017 & June 2018 were included in the study. All the specimens were fixed in 10% neutral buffered formalin and four micron thickness sections were made. The sections were stained with hematoxylin and eosin stain and were subjected to histopathological examination.

Results: A total of 52 specimens were received during the study period. Most of the patients presented with Right sided lesions and most common age group involved were in the fourth to sixth decade. Non neoplastic lesions constitute majority of the cases accounting for 80.7% (39). Testicular neoplasms was observed in 19.2% of cases. Seminoma of testes was the most common testicular cancer and most of the patients presented in the fourth decade.

Conclusion: Although newer imaging modalities offer preoperative diagnosis, a definitive diagnosis is possible and reliable only with the histopathological examination of orchidectomy specimens.

KEYWORDS

INTRODUCTION:

Testicular lesions presents with various clinical presentations and Most of the testicular neoplasms present at a later stage due to painless enlargement. Incidence of testicular cancer is stated to be 1/100,000 in Asian and African /American population. Most common age group involved is in the 3rd -4th decade of life. Multiple risk factors such as cryptorchidism, Gonadaldysgenesis, Klinefelters syndrome and a family H/O testicular cancer has been attributed in the development of carcinoma testes. Regarding etiology of testicular neoplasm, role of loss of 12 p chromosome has been widely debated.

AIMS AND OBJECTIVES:

The aim of the present study is to assess various histomorphological features of orchidectomy specimens.

MATERIALS AND METHODS:

The retrospective study was carried out in the department of pathology in a tertiary care centre, between June 17-18 for a one year period. All the clinical data regarding age, laterality of the lesions were recorded. Orchidectomy specimens were fixed in 10% neutral buffered formalin and four micron thickness sections were made. The sections were stained with hematoxylin and eosin stain and were subjected to histopathological examination.

RESULTS:

Fifty two cases of orchidectomy specimens were included in the present study. Among them non neoplastic lesions constituted maximum number of cases. Twenty one cases presented in the fourth to sixth decade of life. The youngest patient in the present study was 8 yrs old whereas oldest patient with testicular lesion was 79 yrs old. Most of cases presented with right sided testicular lesions.

Table 1: Age incidence of testicular lesions

S. No	Age In Yrs	Non Neoplastic Lesions	Neoplastic Lesions
1	< 20	3	1
2	21-40	11	2
3	41-60	16	5
4	61-80	12	2

TABLE2: Laterality of testicular lesions

S. NO	Right Testicular Lesions	Left Testicular Lesions
1	27(51.9%)	25(48.1%)

Table 3: Histomorphological diagnosis of testicular lesions

S: no	HPE diagnosis	No of cases
1	HEMATOCELE	12
2	PYOCELE	8
3	ATROPHIC TESTES	7
4	TORSION TESTES	8
5	EPIDIDYMOORCHITIS	7
6	SEMINOMA	7
7	MIXED GERM CELL TUMOR	2
8	TERATOMA	1

Among the histomorphological diagnosis, hematocele was the most common lesion. Non neoplastic lesions constituted 80.7% of the cases. Hematocele exhibited areas of hemorrhagic infarction with necrosis of seminiferous tubules. Torsion testis is a urological emergency caused by twisting of the spermatic cord. One case of tuberculous epididymoorchitis was observed in the present study. HPE shows extensive caseous necrosis with well formed granulomas. In the neoplastic lesions seminoma was the most common lesion accounting for seventy%. Tumor showed lobulated architecture with uniform round to oval nucleus with prominent nucleoli. Interlobular septa shows mononuclear inflammatory cell infiltrates. Two cases of mixed germ cell tumor both of them showing embryonal carcinoma features with seminomatous component were encountered in the present study. Highly pleomorphic cells with hyperchromatic nuclei in sheets and cords were present along with areas of hemorrhage and necrosis and numerous atypical mitoses.

DISCUSSION

In the histopathology section, Orchidectomy specimens constitutes significant workload. A detailed clinical history supplemented by radiological features helps in the diagnosis of testicular lesions. In this study right sided lesions were more than left sided lesions. This is in concordance with studies by Syed² and Ali¹ et al. This may be due to the fact that right side testis is placed in a higher in the scrotal sac than the left and is therefore lesser amenable to temperature regulation by the dartos muscle.³ In the present study nonneoplastic lesions of testis constituted maximum number of cases. Among them hematocele was the most encountered lesion. Majority of the cases had a history of trauma. In the study done by Ali¹ et al, and Syed² et al torsion testis and cryptorchid testis constituted maximum number of cases. Genital TB accounts for 18% of cases of tuberculosis in India⁴. In our study one case of tuberculous epididymoorchitis was seen. Syed et al encountered three cases of the same lesion. Testicular torsion is a severe acute urological emergency. It needs timely diagnosis and treatment. It is

generally agreed that irreversible changes will begin after 6 hr. Delay can be fatal and may lead to impaired fertility and loss of the testis⁵. In present study eight cases of torsion testis was observed. Neoplastic lesions accounted for 19.7% of cases in the present study which was similar to the study by Dhar et al⁶. Germcell tumors constituted maximum number of cases in the present study(10%) which was similar to the studies done by Dhar et al⁶ and Hemavathy etal⁷.

CONCLUSION

Testicular lesions exhibit broad histopathological spectrum. Non neoplastic lesions are more common than neoplastic lesions. Among nonneoplastic lesions hematocele is more common and seminoma among malignant category were more common. Clinically neoplastic lesions can mimic non- neoplastic and vice versa .Hence histopathological examination is essential in aiding treatment and follow up and timely intervention is necessary in both non neoplastic and neoplastic lesions.

REFERENCES

1. Lateef AA, Nayak R, Nuzhath T, Shetty P, Nair V. Histopathological Assessment Of Orchidectomy Specimens In a Tertiary care Centre. *Int J of Inno Res in Med Sci.* March 2019;4:(183-7).
2. Hussain SI, Akther G, Reshi R, Farooq S. Histopathological Spectrum of Lesions In Orchidectomy Specimens. A Clinicopathological Study In a Tertiary care Hospital. *J Of Med Sci and Clinical Res.* Dec 2018;6(12):(749-52).
3. Nayak BS. Why the left testis hangs at a lower level than the right? *Medical Hypotheses.* 2009 Aug; 73(2):269-70.
4. Das P, Abhuja A, Datta Gupta S. Incidence, etiopathogenesis and pathological aspects of genitourinary tuberculosis in India: A journey restricted. *Indian J. Urol* 2008; 24: 356-361.
5. Fehér, Á. and Bajory, Z. A review of main controversial aspects of acute testicular torsion. *Journal of Acute Disease.* (2016);5(1), pp.18
6. Dhar R, Bhemat D. Clinicopathological study of Orchidectomy Lesions. *J Of Med Sci and Clinical Res.* May 2017;5(5):21770-73.
7. Hemavathi Reddy et al. Histomorphological analysis of testicular lesions. *Indian Journal of Pathology and Oncology*, October/December 2016;3(4);558-563.