



A Histopathological Study Of Testicular Lesions

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Introduction:

Testicular lesions can occur in individuals from pediatric to adult age groups. Patients with testicular lesions typically present with symptoms such as scrotal pain, scrotal swelling, and an abdominal mass.(1)

It is divided into Neoplastic and Non-neoplastic lesions.

Non-neoplastic testicular lesions encompass a range of conditions, including cryptorchidism (undescended testis), testicular torsion, testicular atrophy, epidermoid cysts, infections such as tuberculosis, infertility issues, malakoplakia, and vasculitis. (2)

However, not all testicular lumps are lesions, and not all lesions are cancerous. Numerous other conditions, such as epididymal cysts and appendix testis (hydatid of Morgagni), can cause pain but are benign.(3)

Testicular cancer has one of the highest cure rates of all cancers with an average of 5-year survival rate of 95%. It is the most common cancer in males of 20-39 year. (4)

Various factors of testicular cancers are cryptorchidism, trauma, infections, genetic and endocrine factors.

Despite new techniques in imaging and tumour marker assay, the diagnosis of testicular lesions is primarily dependent upon Histopathological examination.

Aim:

To do histopathological study of testicular lesions in patients of Dhiraj general hospital.

Objectives:

1. The purpose of our study is to analyse histopathological spectrum.
2. Age-wise distribution and clinical presentation of testicular lesions including neoplastic and non-neoplastic lesions of testis.

Material and Method:

The material consisted of 50 biopsy specimens that were obtained from surgery department.

The received biopsies were processed in the tissue processors where paraffin blocks were made. Multiple 4-5 micron thick serial sections were stained using routine H&E staining method and examined under light microscope to identify the Histopathological features.

Inclusion criteria:

All testis specimens

All age group patients

Exclusion Criteria:

Autolyzed sample

Inadequate biopsies received

Observation and Result:

A total of 50 orchidectomy specimens were reviewed. Out of the total 50 cases, 24% (12/50) were diagnosed as neoplastic lesions and 76% (38/50) were non-neoplastic lesions as shown in table 1 and 2.

In Neoplastic condition, most common lesion is Seminoma which comprises of 41.67% of all neoplastic lesion where in Non neoplastic condition, Undescended testis comprises of largest number of cases i.e.12 (31.58%), followed by Non-specific Epididymo-orchitis – 7 (18.42%), Torsion and Infarction – 6 (15.79%) and Atrophic testis – 6 (15.79%).

Age wise distribution is shown in table 3, where in Non neoplastic condition, most of the patients are age of 11 to 30 years of age group and in Neoplastic condition, most of the patients are age of 21 to 40 years of age group.

Among both neoplastic and non-neoplastic lesions, the most common symptom was testicular (scrotal/inguinoscrotal) swelling as shown in table 4. Least common presentation was weight loss and lower abdominal pain Inflammatory lesions in addition had history of fever.No tumour was found in undescended testes unlike western countries.(5) All 12 neoplasms presented with painless swelling.

Table 1**Neoplastic lesions of testis**

Neoplastic	Number of lesion	%
Seminoma	5	41.67%
Embryonal carcinoma	1	8.33%
Mixed germ cell tumor	1	8.33%
Teratocarcinoma	1	8.33%
Immature teratoma	1	8.33%
Yolk sac tumor	2	16.66%
NHL	1	8.33%
Total	12	100%

Table 2**Non neoplastic lesions of testis**

Non neoplastic	Number of lesion	%
Undescended testis	12	31.58%
T.B. Epididymo-orchitis	4	10.53%
Granulomatous Orchitis	1	2.63%
Testicular Abscess	2	5.26%

Non-specific Epididymo-orchitis	7	18.42%
Torsion and Infarction	6	15.79%
Atrophic testis	6	15.79%
Total	38	100%

Table 3

Lesion	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	Total	%
Undescended testis	2	5	3	2	0	0	0	0	12	31.58
T.B. Epididymo-orchitis	0	1	1	1	0	1	0	0	4	10.53
Granulomatous Orchitis	0	0	1	0	0	0	0	0	1	2.63
Testicular Abscess	0	0	0	1	0	0	1	0	2	5.26
Non-specific Epididymo-orchitis	0	1	0	2	2	2	0	0	7	18.42
Torsion and Infarction	0	2	2	1	0	0	1	0	6	15.79
Atrophic testis	0	3	2	1	0	0	0	0	6	15.79
Total	2	12	9	8	2	4	2	0	38	100
%	5.26	31.58	23.68	21.05	5.26	10.53	5.26	0	100	
Seminoma	0	1	2	2	0	0	0	0	5	41.67
Embryonal carcinoma	0	0	1	0	0	0	0	0	1	8.33
Mixed germ cell tumor	0	0	0	1	0	0	0	0	1	8.33
Teratocarcinoma	0	0	0	0	1	0	0	0	1	8.33
Immature teratoma	0	0	0	0	0	1	0	0	1	8.33
Yolk sac tumor	2	0	0	0	0	0	0	0	2	16.66
NHL	0	0	0	0	0	0	1	0	1	8.33
Total	2	1	3	3	1	1	1	0	12	
%	16.66	8.33	25	25	8.33	8.33	8.33	0	100	

Clinical presentation of testicular lesion Table 4

Mode of presentation	Number of cases(n=50)	%
Testicular swelling	36	72%
Testicular pain	8	16%
Lower abdominal pain	7	14%
Lower abdominal lump	11	22%
Fever	8	16%
Weight loss	7	14%

Discussion:

Comparison between neoplastic vs. non neoplastic with other studies as shown below.

Table 5

	Neoplastic	Non Neoplastic
Our study	24%	76%
Sharma M et al (6)	7%	93%
Reddy S et al (7)	14%	86%

Mean age in study by Chakrabarti PR et al (8) for neoplastic lesion was 38 .1 years which was similar to our study.

Study done by Tekumalla A. (9) shows that clinically patients present with scrotal swelling with or without pain, fever and empty scrotum. Testicular cancers usually present with painless unilateral scrotal swelling.

Conclusion:

Majority of testicular lesions are non- neoplastic and neoplastic lesions are less, most being germ cell neoplasms.

Non- neoplastic lesions are seen in all age groups, but neoplasms are usually seen in older age.

Non- neoplastic lesions mimic neoplastic ones clinically, testicular swelling being the most common complaint, So histopathological examination is necessary to serve an accurate diagnosis of testicular swellings.

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