CLINICOPATHOLOGICAL STUDY OF NEOPLASM'S OF TESTIS IN A TERTIARY CARE HOSPITALK. V. Rajeshwara¹**HOW TO CITE THIS ARTICLE:**

K. V. Rajeshwara. "Clinicopathological Study of Neoplasm's of testis in a Tertiary Care Hospital". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 16, April 21; Page: 4378-4384, DOI: 10.14260/jemds/2014/2446

ABSTRACT: Testicular tumor mainly affects young men. Considerable therapeutic improvements in management based on the cancer's responsiveness to chemotherapy that contains platinum mean that over 95% of these patients can be cured. This clinical study was done during March 2000 to February 2002 on patients admitted with Testicular tumors. Necessary available investigations and High Orchiectomy done and the histopathological reports were analyzed. Based on the reports necessary Chemotherapy/ Radiotherapy was advised. Seminoma constitutes about 50% and rest constitutes Teratoma, Embryonal Carcinoma and Lymphoma. Self-examination of testis is to be advocated for the early detection of the testicular tumors.

KEYWORDS: Testicular Tumors, Orchiectomy, Seminoma, Teratoma.

MESH TERMS: Testicular Cancer, Cryptorchidism, Seminoma, Teratoma, Orchidopexy.

INTRODUCTION: Testicular tumor is a tragedy of the young men in their prime period of life. It is so unfortunate because a malignant lesion in an easily accessible organ is often missed in its early stage. Cancer of testis is more common in young adults accounting less than 1% of all malignancies in men. It is more common in whites, followed by Hispanics and Asians, with blacks having a least risk. Testicular tumors follow a reverse pattern to most of the malignancies because of its decreasing incidence with increasing age. Testicular malignancy is considered as the Hallmark for curable cancer while considering other malignancies treatment because even in advanced stage of the disease it can be treated with better survival rates. Self-palpation of the testis is being thought of as a screening procedure for early detection of testicular neoplasm, similar to self-examination of breasts in females.

This clinical study was conducted on patients admitted with Testicular tumors from March 2000 to February 2002. The aim and objective of the study is to find out different modes of presentation, assess the various available investigations with relevance to staging and frequency of the different types of testicular tumors.

MATERIALS AND METHODS: This clinical study was conducted on patients admitted with testicular tumors from March 2000 to February 2002. Patients admitted with symptoms pertaining to testis, abdomen and supraclavicular region were studied by making use of available facilities in the hospital.

The methods of study followed were:

1. Detailed history and physical examination
2. Routine laboratory and relevant specific investigations
3. Evaluation of preoperative status and appropriate preparation for surgery
4. Surgical treatment (High Orchiectomy)
5. Operative findings, postoperative course and treatment
6. Postoperative complications, histopathological correlation in relevant cases

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7. After confirmation of diagnosis with type of malignancy Chemotherapy and Radiotherapy was given. For radiotherapy patients were referred to higher centre.
8. Regular follow up of the patients were done after completion of Chemotherapy/Radiotherapy.
9. The data was analysed.

RESULTS AND OBSERVATIONS: In this clinical study 20 cases of Testicular tumors admitted during March 2000 to February 2002.

AGEIN YEARS	NO. OF CASES	PERCENTAGE
11-20	4	20
21-30	10	50
31-40	2	10
41-50	2	10
51-60	1	5
61-70	0	0
71-80	1	5

Age incidence at presentation of testicular tumor

MODE OF PRESENTATION: Scrotal swelling was the commonest presenting symptom (95%). Pain and heaviness of scrotum was present in 20% of cases and mass per abdomen in 10% of cases. Other symptoms like hemoptysis, inguinal swelling accounted less than 10% of presenting complaints.

Among 20 cases, 19 were presented with asymptomatic scrotal mass. 2 cases had abdominal secondaries (para-aortic lymph nodal enlargement). In one case scrotal skin was involved with palpable inguinal lymph nodes. Two patients had right-sided undescended testis. Two patients presented with scrotal swelling and mass per abdomen.

One patient had hemoptysis history due to lung secondaries.

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SYMPTOM	NO. OF CASES	PERCENTAGE
1) Scrotal swelling	18	90%
2) Pain/Heaviness of scrotum	10	50%
3) Mass per abdomen	2	10%
4) Scrotal swelling& mass per abdomen	0	0
5) Undescended testis	2	10%
6) Hemoptysis	1	5%
MODE OF PRESENTATION

DURATION OF SYMPTOMS: In this study the duration of symptoms ranged from 15 days to 3 years. Majority of patients presented within 6 months of presentation of symptoms (80%).

DURATION OF SYMPTOMS	NO. OF CASES	PERCENTAGE
1) 0-1 month	7	35%
2) 1-3 months	3	15%
3) 3-6 months	7	35%
4) 6months-1 year	2	10%
5) >1 year	1	5%

DISTRIBUTION OF SCROTAL SWELLING: In this study the maximum no of cases were seen on right side, with an incidence of 65%.Next common was on left side with an incidence of 35%.There were no cases with bilateral involvement in this study.

SIDE AFFECTED	NO. OF CASES	PERCENTAGE
RIGHT	13	65%
LEFT	7	35%
BILATERAL	0	0

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RELATION OF INJURY WITH TESTICULAR TUMOR: In this study 3 patients out of 20 cases gave a history of trauma with an incidence of 15%.

ENVIRONMENTAL POLLUTION AND ITS RELATION TO TESTICULAR TUMOR: In this study of 20 cases, 6 cases were from Urban area constituting 30% and the remaining were from rural areas with an incidence of 70%.

URBAN/RURAL	NO. OF CASES	PERCENTAGE
URBAN	6	30%
RURAL	14	70%

RELATIVE FREQUENCY OF DIFFERENT TYPES OF TESTICULAR TUMORS: In this study Seminoma constituted the bulk with an incidence of 50%. Second infrequency was Teratoma with an incidence of 40%. Malignant lymphoma constituted 5%.

METASTASIS:

Metastasis was noticed in 4 cases out of 20 patients of this study constituting 20%

SITE OF METASTASIS	NO. OF CASES
Para aortic& Iliac nodes	2
Para aortic& supraclavicular	0
Lungs	1
Lungs & supraclavicular nodes	0
Scrotal skin & inguinal nodes	1

DISCUSSION: Testicular tumor is common in 3rd decade (between 21-30 Years) with an incidence of 1%. Young patients are more commonly affected than older patients. The etiological factors like undescended testis, groin hernia, testicular trauma, mumps, mumps orchitis, elevated testicular temperature, and hormonal, prenatal, and occupational factors in the development of young adult testicular cancers has been suggested by a number of studies.¹ Trauma may act as a trigger for

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diagnosis. One of the previous case-control studies has addressed the issue of testicular cancer following trauma or injury to the testis.² One of the study found evidence that a relatively high frequency of participation in moderate and strenuous recreational activity in one's midteens may have an adverse effect on risk of testicular cancer.³

The survey done by JOHN A THORNHILL et al clearly disclosed widespread public ignorance of the elementary facts relating to testicular cancer. There is evidence to suggest that delay in presentation is more of a problem than delay in referral and this has prompted some authors to suggest that a public education campaign might be helpful.⁴ Other studies have found no evidence of such a relationship.^{5,6,7,8}

Testicular tumors, most of which are Germ cell tumors, are the most common malignancy in young men aged between 15 to 44 years.⁹ Treatment for undescended testis before puberty decreases the risk of testicular cancer.¹⁰

Dixon and Moore, (1952) found a significantly higher incidence of this tumor in rural areas of England and Wales compared with large cities.¹¹ With one amazing development, the introduction of Cisplatin into standard chemotherapy for testis cancer, there was a complete transformation from the expectation of early death to the potential of long-term survival in most young men with this dreadful disease.¹²

The first modern classification of testicular germ cell tumors was formulated by Friedmann and Moore (1946).¹³ This classification was refined in a slightly modified form by Dixon and Moore(1952), who published their classification in the first Armed Forces Institute of Pathology/ American Registry of Pathology (AFIP) series of tumor atlases.

Scrotal swelling was the commonest mode of presenting symptoms (95%).History of Injury was present in 15% of cases. Right side was the commonest site of affection (65%).Majority of the patients presented within 6 months of presentation of symptoms (80%).

In this study 3 patients gave a history of injury to scrotum with an incidence of 15%.

Cryptorchidism is found in 10% of testicular tumor patients and may also increase the risk of bilateral disease. The study conducted by Gilbert and Hamilton.¹⁴ (1940) and Tata Memorial Hospital Bombay (1958-1967) compared. Hence the cryptorchidism or undescended testis is one of the major risk factor for the etiology of testicular tumors.

Metastasis was noticed in 4 cases out of 20 cases of this series with an incidence of 20%.This is comparable with various previous studies where the incidence ranges from 13.05% to 40%.

In this study the youngest patient being 14 years old and oldest being 75 years old man. The mean age in this study is about 31.5 years which is almost similar to that of Deans (1935) series of 33.5 years.

Right testis is more often the seat of malignancy as per previous literature. The present study also shows the right side of testis involvement in 65% of cases.

In this study 6 cases were from urban area with an incidence of 30%and the remaining 14 cases were from rural areas constituting 70%. As per the earlier study in England and Wales it occurs more often in rural males.¹⁵

According to earlier studies the germ cell tumors accounted for 98% of tumors.¹⁶ In this study Seminoma constituted the bulk with an incidence of 50%.Teratoma constituted 40%.Malignant lymphoma constituted 5%.

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CONCLUSION: Testicular malignancy being more commonly affects young individuals the early detection plays a major role in the prognosis of the disease. So the self-examination of the testis as compared to breast carcinoma screening programme has to be implemented and necessary health education to be given. Seminomatous tumors have a better prognosis than non-seminomatous tumors. Undescended testis has an important role in the etiology of Testicular malignancy. So early detection of the undescended testis and early orchidopexy can play a role of prophylactic modality in preventing occurrence of testicular malignancy.

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