

# A Rare Case of Mixed Germ Cell Tumor of Testies in Young Male Patient

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**Abstract:** Testicular cancer, constituting 1 - 1.5 of male neoplasms, predominantly manifests as germ cell tumors GCT, with seminomas typically occurring in the fourth decade of life and non - seminomatous germ cell tumors NSGCT in the third. This case report describes a 22 - year - old male presenting with a left scrotal swelling of seven months duration. Clinical and radiological evaluations indicated a significant mass in the left testis. Surgical intervention via left inguinal approach was performed, leading to a diagnosis of mixed germ cell tumor comprising embryonal carcinoma, teratoma, and yolk sac tumor components. Post - operative biochemical markers showed a marked reduction, confirming the effective removal of tumor tissue. The patient is currently under surveillance and is recovering well.

**Keywords:** testicular cancer, germ cell tumor, mixed germ cell tumor, radical orchidectomy, biochemical markers

## 1. Introduction

Testicular cancer represents around 1 - 1.5 % of male neoplasm. The predominant histology is germ cell tumour (GCT). The peak incident of Seminoma is the fourth decade of life, with the non - seminomatous germ cell tumours (NSGCT) being more common in third decade of life. Risk factors for the testicular tumours includes cryptorchidism, family history of testicular cancer, and intratubular germ cell neoplasia.

## 2. Case Report

**History:** A 22 years old male patient presented to surgical OPD at civil hospital, Rajpipla with complains of:

Left scrotal swelling since - 7 months

Associated with heaviness at left scrotum since - 7 months

Not associated with pain, burning micturition, haematuria or fever.

No history of any trauma.

No past operative history.

### On Examination:

General examination:

- Temperature - normal
- Pulse - 84/minute
- Blood pressure - 110/70 mm of hg
- Respiratory system - normal

### Local examination:

An approx. 8 cm \* 8 cm \* 5 cm size swelling in the left scrotum with smooth surface, well defined margins and hard in consistency.

Get above the swelling - Possible.

Trans - illumination test - Negative.

No palpable mass in Abdomen.

### Investigations:

All routine blood investigations were normal.

#### BIOCHEMICAL MARKERS:

- ALPHA FETOPROTEIN - 10291
- Beta HCG - 7

Chest X - ray - Normal.

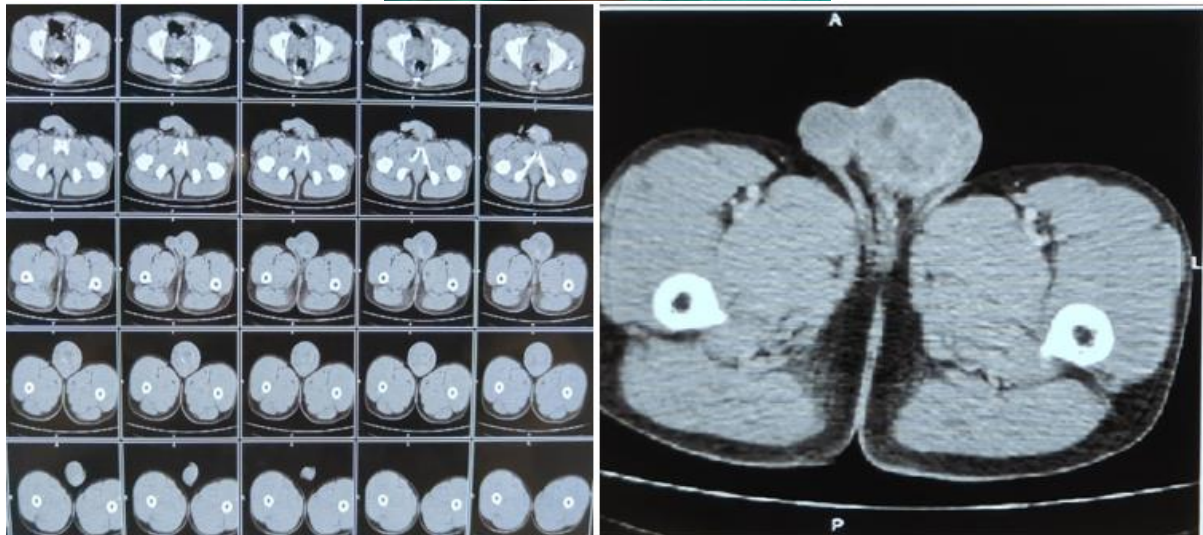
#### ULTRA SONOGRAPHY:

6 cm \* 4 cm \* 4 cm size heterogenous hyperechoic mass in Left scrotum.

#### CECT ABDOMEN AND PELVIS:

Left testis appears enlarged and measuring 75 mm \* 75 mm with heterogeneous enhancement with multiple non - enhancing areas largest measuring 48 mm \* 46 mm.

Left epididymis and spermatic cord appears mildly enlarged with oedematous scrotal wall.



**Plan of Management**

After routine Haematological, Biochemical and Radiological investigations decision was taken to operate this testicular mass from left inguinal approach. On post operatively day - 7 biochemical markers of the patients were repeated, which are showed in the table:

	Pre operative	Post operative
Beta - HCG	7 mUI/mL	1.2 mUI/mL
Alpha fetoprotein	10291 ng/ml	34 ng/ml

**Histopathology Report:**

Diagnosis is suggestive of Mixed germ cell tumour of left testis.

Component and percentage of visible tumour:

- Embryonal carcinoma - 10%
- Teratoma - 40%
- Yolk cell tumour - 30%

Tumour is confined to testis.

Epididymis, tunica, spermatic cord are free of tumour.

No Lympho - vascular invasion.

**Immunohistochemistry:**

Embryonal carcinoma - 10%

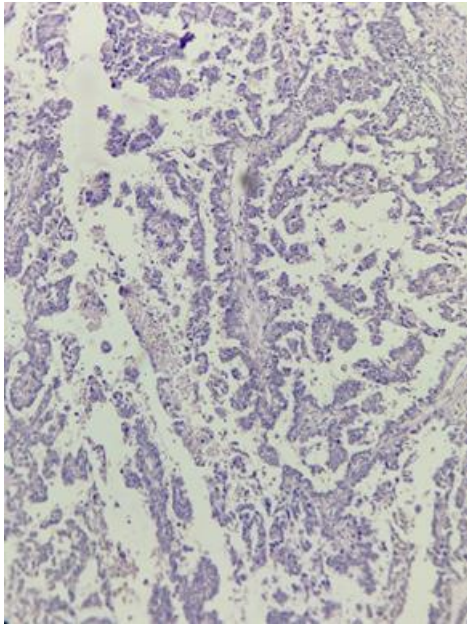
Teratoma - 40%

Yolk sac tumour - 30%

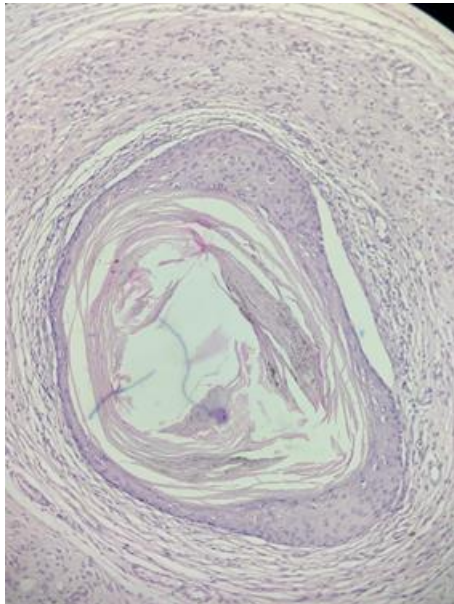
Necrosis - 20%.

**3. Discussion**

The Patient was diagnosed as left testicular mass and operated for left radical orchidectomy, from the histopathology examination it was diagnosed as Mixed germ cell tumour.



10X view, Papillary arrangement of neoplastic cells.  
(Component of Embryonal carcinoma / yolk sac tumour)



10x view, Squamous cells with keratin pearl (Component of Teratoma)

Mixed germ cell tumour contains more than one germ cell tumour component in various combinations. Tumours occurs at the mean age group of 30 years.

Post orchidectomy there was significant decrease in both the biochemical marker which is suggestive of removal of all the tumour tissue.

Patient is doing well after the surgery and is in surveillance.

#### 4. Summary

In our study a 22 years old male patient was primary diagnosed left testicular mass, Pre operative significant increase in biochemical marker (AFP & Beta HCG), operated for it left radical orchidectomy, HPE report s/o Mixed germ cell tumour, Embryonal carcinoma - 10%, Teratoma - 40%,

Yolk cell tumour - 30%, Post orchidectomy there was significant decrease in both the biochemical marker.

#### Abbreviations

GCT – Germ cell tumour

NSGCT – non - seminomatous germ cell tumours

AFP – Alpha fetoprotein

CECT – contrast enhanced computed tomography

cm – centimetre

mm - millimetre

mIU/mL – milli international units per millilitres

ng/ml – nanogram per millilitres

#### Acknowledgment:

I Herewith acknowledge my patient, colleagues and hospital staff for their support during the study.

#### Discussion References:

Bailey and love's short practice of surgery 28<sup>th</sup> edition.

Sabiston textbook of surgery 21<sup>st</sup> edition.

Devita, Hellman and Rosenberg's cancer principles and practice of oncology 10<sup>th</sup> edition.

Silverberg's principles and practice of surgical pathology and cytopathology 5<sup>th</sup> edition.