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**Introduction & Objectives:** Embryonal carcinoma of the testis is a malignant germ cell tumor present in 40% of testicular tumors, but pure embryonal carcinomas are rare and occur in only 3-4% of cases. It is an aggressive tumor due to its tendency to early hematogenous spread.

We present two cases of pure embryonal carcinoma of the testis in young male patients.

Case 1: 20 year-old patient who presented with left testicular induration. The clinical diagnosis was of left testicular tumor, for which the patient underwent surgery. Serum levels of tumor markers were normal. A regional lymphadenectomy was subsequently proposed which revealed tumor invasion and the patient is currently under chemotherapy treatment with Etoposide and Cisplatin.

Case 2: 36 years old patient who presented a painful left testicular mass with a firm consistency. The patient received surgical treatment with left sided orchidectomy and chemotherapy. For three years he had been disease-free before being again admitted with pulmonary and hepatic metastasis. The patient went into cardiac arrest 4 days later and died of multiple organ failure.

In both cases we received a left orchidectomy specimen measuring 4/3/2 cm and 6/4/3 cm respectively. On cut section the testes showed a well circumscribed, grayish-white tumoral mass of 2/1.5 cm and 2.3/1.5 cm respectively with foci of haemorrhage. The adjacent parenchyma was macroscopically normal with a firmer tunica albuginea. There was no macroscopic extension into the epididymis or spermatic cord and no lymph nodes were sent for examination in either of cases

**Materials & Methods:** The specimens were fixed using 10% formaldehyde, paraffin sections were conducted and results were assessed with haematoxylin-eosin and immunohistochemical staining.

**Results:** Microscopically both tumours were composed of solid sheets of dense eosinophilic or amphophilic cells, with poorly defined cytoplasmic membranes and marked pleomorphic nuclei, intratumoral necrosis and haemorrhage, fibrotic areas, mixed inflammatory cell infiltrate and intratubular calcifications. Germ cell neoplasia in situ was found in residual seminiferous tubules and lymphovascular emboli. There was rete testis invasion and extension through tunica albuginea, but no invasion in the epididymis or spermatic cord.

Immunohistochemistry: CD30 and AE1/AE3 strong + in tumor cells, Vimentin - in tumor cells and + in stromal cells and Ki67- 90% + in tumor cells. This was suggestive of pure EC and helped distinguish it from seminoma, large cell lymphoma or other GCT. PLAP and CD117 had a weak positivity in GCNIS.

**Conclusions:** Pure embryonal carcinoma is a rare tumour that behaves more aggressively than mixed GCTs, a thoroughly histopathological evaluation is needed and evidence of metastatic tumor spread should be looked for at presentation for better management, treatment and prognosis of the patient.