TUMOURS OF THE TESTIS

EPIDEMIOLOGY

- Testicular tumours are the commonest solid malignancies in young adult males although they are relatively common, representing around 2% of malignancies in the males

AETIOLOGY

- Testicular tumours are associated with the following:

1. Undescended and ectopic testis
2. Increased incidence in patients who are infertile
3. Increased incidence in those who had contra-lateral testicular malignancy

TYPES OF TESTICULAR MALIGNACIES

1. Seminoma
2. Teratoma- a type of non-seminomatous germ cell tumour (NSGST)

SEMINONA

- Accounts for 60% of testicular malignancies
- Arises from seminiferous tubules
- Occurs between the ages of 30 and 40 years
- It is a relatively slow growing tumour

Seminoma cont.

PATHOLOGY

MACROSCOPIC APPERANCE

- It is solid appearing like a cut potato on cut section

MICROSCOPIC APPEARANCE

- Cells vary from well differentiated spermatocytes to undifferentiated round cells with clear cytoplasm
- Some 10% arise from undescended testes

TERATOMA

- Account for 40% of testicular malignancies
- Peak incidence age is 20-30 years
- It is thought to arise from primitive totipotential germ cells

Teratoma cont.

PATHOLOGY

MACROSCOPIC APPEARANCE

- It has a markedly cystic appearance
- Cut surface may appear like colloid goitre with areas of haemorrhage and infarction

MICROSCOPIC APPEARANCE

- The cells are very variable and the tumour may contain cartilage, bone, muscle, fat and other tissues

SPREAD

i. LOCAL:

- The testis is progressively destroyed by the tumour
- Spread through the capsule is unusual , but occasionally in advanced cases there may be ulceration of the scrotum

ii. LYMPHATIC

- To the para-aortic L/nodes via the lymphatics accompanying the testicular vein
- In advanced cases, there may be enlargement of supraclavicular L/nodes , especially on the left side

Spread cont.

iii. HAEMATOGENOUS:

- Spread from the Teratoma occurs relatively early to the lungs and liver
- To the seminoma, this tends to be late in the disease

CLINICAL FEATURES

- Painless swollen testicle or a hard lump on the testis which may be associated with an overlying secondary hydrocele which sometimes contains blood stained fluid.
- Rarely as a painful rapidly enlarging swelling which may be mistaken for orchitis
- Rarely gynaecomstia due to production of Paraneoplastic hormones
- Metastatic features such as difficulty in breathing ascites and lymphadenopathies

INVESTIGATIONS

1. RADIOLOGICAL INVESTIGATIONS

- **SCROTAL ULTRASOUND-** Reveals a solid tumour in a hydrocele
- **SCROTAL CT SCAN**
- **SCROTAL MRI**
- **ABDOMINAL CT SCAN:** To seek secondary spread and also stage the disease
- **CHEST X-ray:** To seek pulmonary spread

Cont'd

2. LABORATORY INVESTIGATIONS

- **TUMOUR MAKERS such as**:

a) **Alfa(α)feto proteins (AFP):** Produced by teratomas

b) **Beta(ß)human gonadotrophin hormone:** Produced by teratomas and some pure seminomas

c) **Biopsy :** For histology

❑**These makers are useful for making diagnosis and follow ups**.

TREATMENT

- **Orchidectomy is performed if malignancy is confirmed.**

- Inguinal rather than scrotal exploration is performed to avoid exposure to scrotal lymphatics which drain to the inguinal lymphnodes, unlike the spermatic cord which drains into the internal iliac nodes

Treatment cont'd

SEMINOMAS

- Orchidectomy followed by radiotherapy to the ipsilateral iliac and para-aortic lymphnodes**(seminomas are highly sensitive to radiotherapy)**
- Chemotherapy may also be added for extensive disease.

Treatment cont'd

TERATOMAS

- Orchidectomy combined with chemotherapy. **(Teratomas are NOT radiosensitive).**