Difference Between Epididymis and Testicular Cancer

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Key Difference – Epididymis vs Testicular Cancer

Most people think that epididymis is a name of a disease. However, epididymis is only a part of the male reproductive system that facilitates the transportation and maturation of the spermatozoa. On the other hand, testicular cancers are a disease that affects the male reproductive system. This is the key difference between epididymis and testicular cancer.

What is Epididymis?

The epididymis is one part of the male reproductive system whose function is the facilitation of transportation of semen. This tubular structure moves along the posterolateral side of the testis. The two components of epididymis are,

- Efferent ductules – this forms the head of the epididymis by forming an enlarged coil that sits on the posterosuperior pole of the testis.
- True epididymis – all the efferent ductules drain into this thin coiled duct. It continues inferiorly along the posterior aspect of the testis as the body of the epididymis and enlarges to form the tail of the epididymis at the inferior pole of the testis.

Figure 01: Epididymis
Functions of Epididymis

- Storage of spermatozoa until ejaculation
- During the passage of spermatozoa through the epididymis, they acquire the ability to fertilize an egg.

The end of the epididymis is continuous with the ductus deferens.

What is Testicular Cancer?

Testicular cancers constitute about 10% of all cancer deaths. There are different varieties of testicular cancers depending on their anatomical and morphological features.

Risk Factors

- Testicular dysgenesis syndrome which includes cryptorchidism, hypospadias and poor sperm quality.
- Inutero exposure to pesticides and nonsteroidal estrogens
- Familial predisposition

Pathological Classification

- Seminomas
- Seminomas and spermatocytic seminomas
- Non seminomas
- Embryonal carcinoma
- Choriocarcinoma
- Yolk sac tumor
- Teratoma
- Sex cord stromal tumor
- Leydig cell tumor
- Sertoli cell tumor

Seminomas

These are the commonest germ cell tumors occurring in the testes. The highest incidence is in the third decade of the life.

Spermatocytic Seminoma
In contrast to the seminomas, these tumors are slow growing, masses that predominantly affect older men.

**Embryonal Carcinoma**

These are more aggressive than seminomas and their incidence is highest during the 2\textsuperscript{nd} and 3\textsuperscript{rd} decades of life.

**Yolk Sac Tumor**

This is the commonest tumor in infants and children up to 3 years of age.

**Choriocarcinoma**

These are a highly malignant set of tumors with a high malignant potential.

**Teratoma**

Teratomas constitute of tissue components derived from different germinal layers. In postpubertal males, teratoma is considered as a malignant tumor.

*Figure 01: Testicular Seminomas*
Clinical Features

- Painless enlargement of the testis is the characteristic feature of testicular neoplasms.
- Biopsy of a testicular tumor is associated with spillage of the tumor which would necessitate the excision of scrotal skin along with orchiectomy. Therefore the management of testicular masses is carried out through radical orchiectomy.
- The spread of testicular tumors predominantly happens via the lymphatics. Para-aortic nodes are the first to get involved.

Staging

- Stage I – tumor confined to the testis, epididymis or the spermatic cord
- Stage II – distant spread confined to the retroperitoneal nodes below the diaphragm
- Stage III – metastases outside the retroperitoneal nodes or outside the diaphragm

Biomarkers

HCG, AFP, and lactate dehydrogenase levels are elevated in testicular cancers.

Treatment

- Radiotherapy is useful in the management of seminomas which are radiosensitive.
- Radical orchiectomy is the surgical procedure carried out for the excision of testicular masses.
- Pure choriocarcinomas have a poor prognosis.

What is the Difference Between Epididymis and Testicular Cancer?

| Epididymis vs Testicular Cancer |
|-------------------------------|---------------------------------|
| Epididymis is a component of the male reproductive system | Testicular cancers are the malignant tumors that occur in the testes. |

| Organ vs Disease |
|-----------------|--------------------------------------------------|
| Epididymis is an organ. | Testicular cancer is a disease that affects the male reproductive system. |
Summary – Epididymis vs Testicular Cancer

The epididymis is one part of the male reproductive system whereas testicular cancers are a malignant disease condition that affects the male reproductive system. So the obvious difference between epididymis and testicular cancer is that epididymis is an organ while testicular cancer is a disease.

References:


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1. “Figure 28 01 03” By OpenStax College – Anatomy & Physiology, Connexions Web site, Jun 19, 2013 (CC BY 3.0) via Commons Wikimedia
2. “Seminoma of the Testis” By Ed Uthman, MD. – (Public Domain) via Commons Wikimedia

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