

The male genital system

This system is responsible for production of spermatozoa and testosterone which is sex hormones, so consider as endocrine and exocrine system.

The system is consisting of the following:

1. Two testes.
2. Two epididymis
3. Two spermatic cords.
4. Two ampulla of ductus deference.

Also this system is consisting of accessory sex glands including:

1. Ampulla of ductus deference.
2. Prostate gland.
3. Seminal vesicle.
4. Cowper gland (bulbo-urethral) gland.

The testis:

Is oval structure, consist of cortex and medulla, covered by dense C-T called tunica albuginea, consider the white capsule, from it many septae or trabeculae are emerging toward the parenchyma of the testis to sustain its internal tissue and to carry blood vessels to the testis.

The cortex have many seminiferous tubules, extended toward the center of the testis called mediastinum testi, each seminiferous tubule is lined by germinal epithelial cells called spermatogonia which are resting on the basement membrane, these are cuboidal cells with prominent nuclei divided into two cells, one of them is resting on the basement membrane, and the others develop into primary spermatocyte, pass to the lumen of the seminiferous tubule, these cells have a prominent nuclei and it will be divide into secondary spermatocytes, form a second row toward the center of the lumen. These processes which are the formation of spermatogonia into primary spermatocytes is called spermatogenesis. The second stage is that transformation of primary spermatocytes into secondary spermatocytes, then into spermatid which is smaller cells near the center of the lumen and it will be transform into spermatozoa by a process called spermeogenesis.

In between the spermatogonia, there are large cells with a cytoplasm, flame-like called Sertoli cells, these cells are supporting cells and nutritive to the new sperm formation until to be mature and release from the lumen toward the head of epididymis.

In between the seminiferous tubules there are interstitial C-T, enriched with blood vessels and groups of cells, pyramidal or polygonal cells called Leydig cells or interstitial cells, responsible for secretion of testosterone hormone.

The head of epididymis:

Is formed by epithelial cells (pseudo-stratified columnar, ciliated cells) resting on the basement membrane and encircled by C-T and smooth muscle fibers.

The body of epididymis:

Is lined by simple columnar epithelium with cilia.

The tail of epididymis:

Is lined by simple columnar epithelium, also encircled by C-T and smooth muscle fibers.

Vas deference (ductus deference):

Is tubular structure, its lumen is lined by simple columnar epithelium, and the lumen is very narrow, encircled by C-T and smooth muscle fibers.

The ampulla of the D.D.:

Is the expanded portion, terminal part of the D.D., consider as glandular structure (formed by folded mucosa) lined by simple columnar (pseudo-columnar epithelium) responsible for secretion of fluids to the sperms when pass through the D.D. to the seminal vesicle and prostate.

The seminal vesicle:

Is folded mucosa which have of pseudo-stratified columnar epithelium and the lamina propria also have many tubular glands for secretion of watery fluid to the sperms, these folds are covered by C-T and muscular tissue of smooth type.

Prostate gland:

Is prominent gland, formed by 5 lobes, each lobe is containing many glandular tissue, each gland is formed by epithelial cells lining the mucosa of the gland, also the glands of mucosa are present in the lamina propria, the interstitial C-T is containing blood vessels and delicate C-T, the whole gland is encircled by thick dense C-T.

The gland have a duct, combine with the duct of the seminal vesicle and ampulla of D.D. called ejaculatory duct lined by simple columnar epithelium, the cells of the gland secrete a milky media to the volume of sperms and the watery fluid.

Bulbo-urethral gland (Cowper's gland):

Is small gland present along the junction of the urethra, it is formed mucosa, folded and lined by simple cuboidal-columnar cells responsible for secretion of mucus media pass to the lumen of urethra.



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