7.9: Dermal Adnexa - Sebaceous Glands

Sebaceous glands are composed of clusters of pale-staining, highly vacuolated epithelial cells (sebocytes) that are located adjacent to follicles. Sebaceous glands are responsible for producing sebum, a lipid-containing compound with moisturizing and antimicrobial properties. Sebocytes secrete sebum in a manner called "holocrine secretion", in which the sebocytes rupture, thereby releasing their cytoplasmic contents (sebum) into the sebaceous duct. The sebaceous duct and the sebum empties into the isthmus portion of the hair follicle, coating the hair shaft and surrounding epidermis in sebum.

Specialized sebaceous glands by location

Meibomian gland – Eyelid

The Meibomian glands are sebaceous glands that open through a common duct onto the margin of the eyelid. Histologically, the sebocytes of the Meibomian gland appear identical to those of sebaceous glands in the skin, but are organized into a much larger, single gland. The Meibomian gland’s lipid-rich secretion (meibum) contributes to the tear film.

Glands of Zeis – Eyelid

Glands of Zeis are specialized sebaceous glands that are associated with eyelashes, specialized hair follicles located at the margins of the eyelid. The Glands of Zeis are histologically identical to cutaneous sebaceous glands located elsewhere.
Hepatoid (perianal) glands – Perianal, parapreputial, and tail skin

Hepatoid glands are modified sebaceous glands in dogs, so named due to their morphologic similarity to hepatocytes. These glands are primarily located in the perianal skin (perineum), as well as along the base of the tail and prepuce. They are more developed in male dogs. Histologically, they appear as discrete lobules composed of an outer layer of small basaloid cells surrounding larger, polygonal cells with abundant eosinophilic (pink) cytoplasm (resembling hepatocytes).

These glands are of clinical importance as hepatoid gland adenomas (benign tumors) are common. Tumors of hepatoid glands should be distinguished from the tumors of the apocrine glands of the anal sac (discussed below).

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**FIGURE(S):** Sebaceous Type Glands