

Eccrine Unit

- Eccrine Glands: palms, soles, forehead, axillae
 - Coiled, secretory component in deep dermis
 - Single layer of cuboidal epithelium, eosinophilic cytoplasm
 - Surrounded by myoepithelial cells
- Eccrine Ducts
 - Long duct, extends from glandular coil in deep dermis to exit through the epidermis as an acrosyringium
 - Two layers of epithelium, no myoepithelial cells

Pilosebaceous Apocrine Unit

- Hair Follicles
 - Types: terminal (diameter ≥ 0.06 mm), vellus (diameter ≤ 0.03 mm)
 - Zones (from superficial to deep):
 - Infundibulum = region above entry of sebaceous gland duct
 - Isthmus = extends from attachment of arrector pili muscle to entry of sebaceous gland duct
 - Hair bulb = dermal papillae and hair matrix
- Phases: Anagen (growth), Catagen (involution), Telogen (resting phase)
- Hair shaft = composed of cuticle, cortex, and medulla
- Arrector pili = smooth muscle innervated by sympathetic nervous system
- Sebaceous Glands
 - Acinar pattern, multiple lobules
 - Inner layers of cells with vacuolated, lipid-filled cytoplasm
 - Outer rim of cuboidal basophilic germinative cells
 - Short duct with stratified squamous epithelium, enters into pilosebaceous unit
 - Rarely the sebaceous duct exits through the epidermis directly
- Apocrine Units: axillae, anogenital region, areola, eyelid
 - Coiled, secretory component in dermis
 - “Decapitation secretion”, “snouts”
 - Single layer of cuboidal to columnar epithelial cells, eosinophilic cytoplasm
 - Surrounded by myoepithelial cells
 - Short duct opens into infundibulum of associated hair follicle

Fig. 2.1 The cutaneous adnexal structures include the pilosebaceous apocrine unit and the eccrine unit. Apocrine glands and sebaceous glands secrete their products into the hair follicle through short ducts. The sebaceous glands are often seen in association with hair follicles; apocrine glands are more inconspicuous. The smooth muscle arrector pili connects the pilosebaceous apparatus to the epidermis, contraction of the arrector pili produces goose bumps. The eccrine unit is distinct and separate from the pilosebaceous apocrine unit. The glands lay deep in the dermis, coiled like a garden hose, and are connected to the epidermis by a long straight eccrine duct. The coiled exit of the eccrine duct through the epidermis is termed the acrosyringium

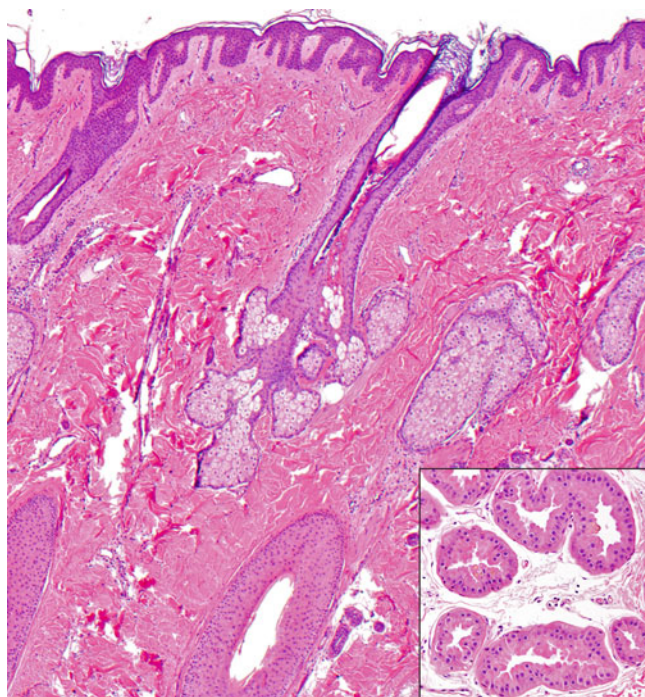
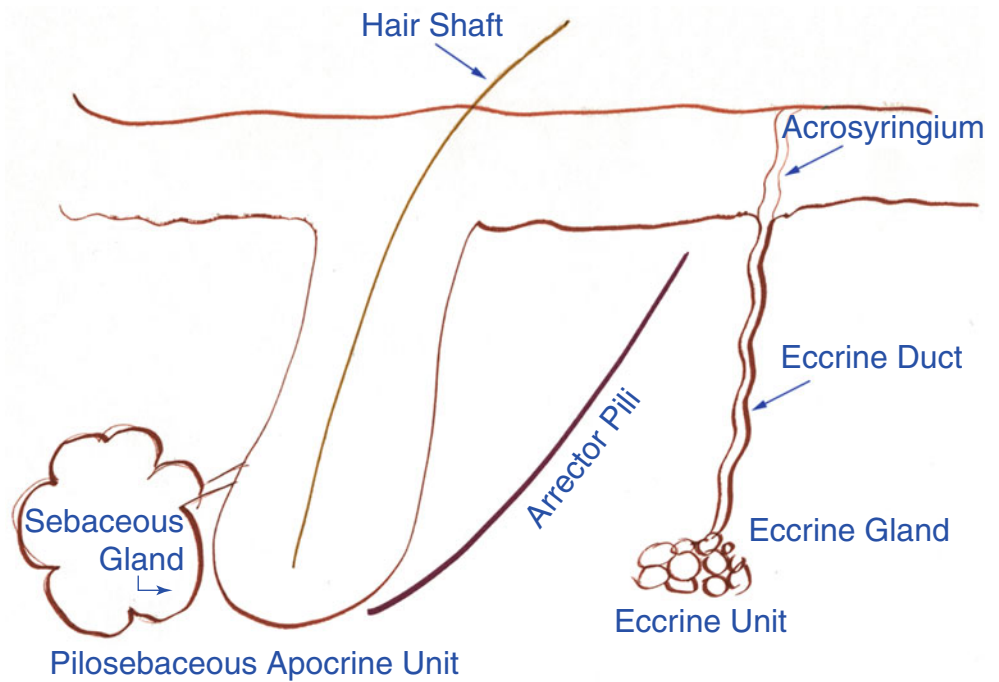


Fig. 2.2 Pilosebaceous Apocrine Unit. The sebaceous glands are associated with hair follicles. Apocrine glands are lined by plump epithelial cells with deep pink cytoplasm and surface blebs that are secreted by decapitation (*inset*)

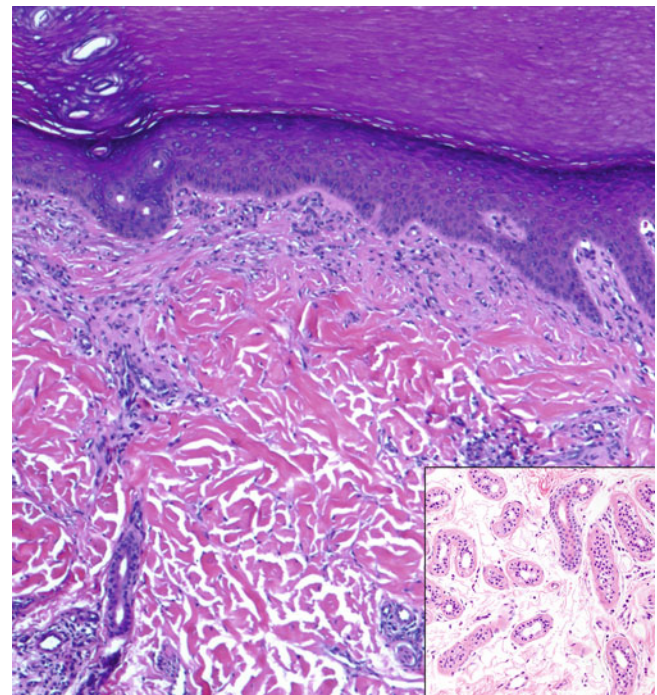


Fig. 2.3 Eccrine unit. The acrosyringium coils through the epidermis overlying the dermal eccrine duct. The glands are lined by secretory epithelium with pale pink cytoplasm; the ducts have less cytoplasm and are more brightly pink (*inset*)