



DERMATOPATHOLOGY

## PROGRESSIVE HISTOPATHOLOGICAL CHANGES IN HIDRADENITIS SUPPURATIVA: TRACING A LINE FROM FOLLICULAR PLUGS TO PURULENT CYSTS

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**Background:** Hidradenitis suppurativa (HS) is a chronic inflammatory disease that involves the apocrine-bearing regions of the skin. It heavily impacts the patient's quality of life, although new therapeutic approaches have significantly improved the management of its clinical manifestations. HS has been recently linked to mutations in the gamma-secretase complex, but its early histopathogenetic mechanisms are still unknown. New scientific evidence seems to discredit previous theories based on primary changes in apocrine glands in favor of follicular-centered theories. In order to understand the histopathogenesis of HS, we have conducted a histopathological study on 15 patients' samples from the axillary and inguinal folds, observing the progressive morphological changes of HS.

**Observation:** Alterations of the pilo-sebaceous-apocrine apparatus were observed during the very early phase of the disease. Thick hyperkeratosis leading to infundibular plugging was seen together with a sparse lympho-monocytic infiltrate in the perivascular and perifollicular dermis. In the following phases of the disease, progressive enlargement of the proximal follicular segments was noticed. This resulted in the formation of large keratotic cysts, which were subsequently engulfed by massive suppurative and granulomatous inflammation. In late phases, when follicular hyperkeratosis had completely obstructed the apocrine ducts openings, the entire glandular lumen dilated creating secretion-filled cysts, which were seemingly unaffected by the inflammation.

**Key message:** Our study enlightens some of the early HS morphological alterations and how these changes lead to the histopathological scenario that can be observed in the already well known late phases. More studies will be necessary to fully understand the histopathogenesis of HS. This could foster the development of new drugs or efficient preventing measures apt to further improve HS management.

