



Courtesy Dr. T. Newell





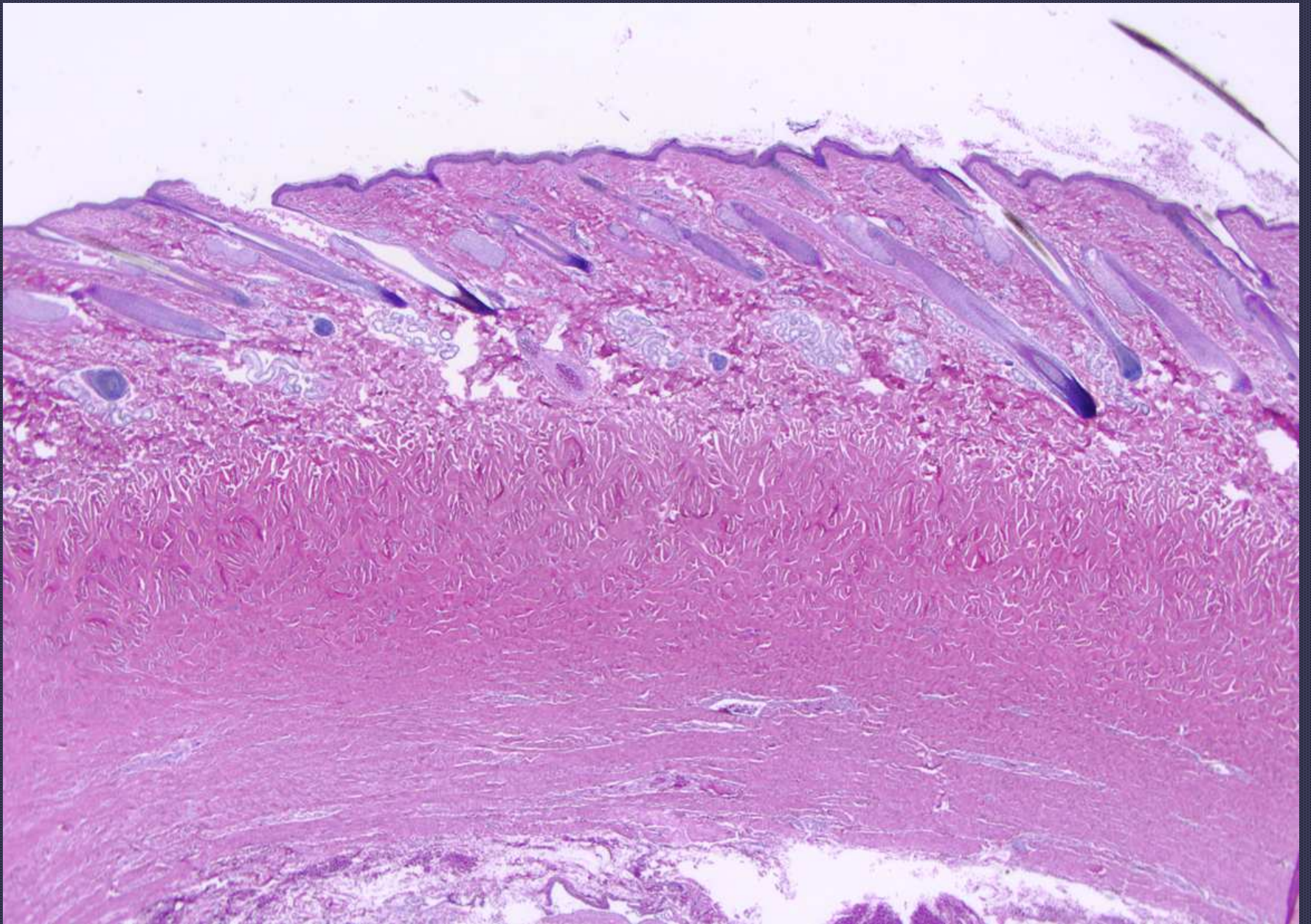






HERDA

- Histology (sometimes subtle):
“clumped”, poorly organized collagen fibers in deep dermis, or zonal deep dermal separation
- Collagen stains normally with Masson’s trichrome



Normal horse skin

Case report

Zonal dermal separation: a distinctive histopathological lesion associated with hyperelastosis cutis in a Quarter Horse

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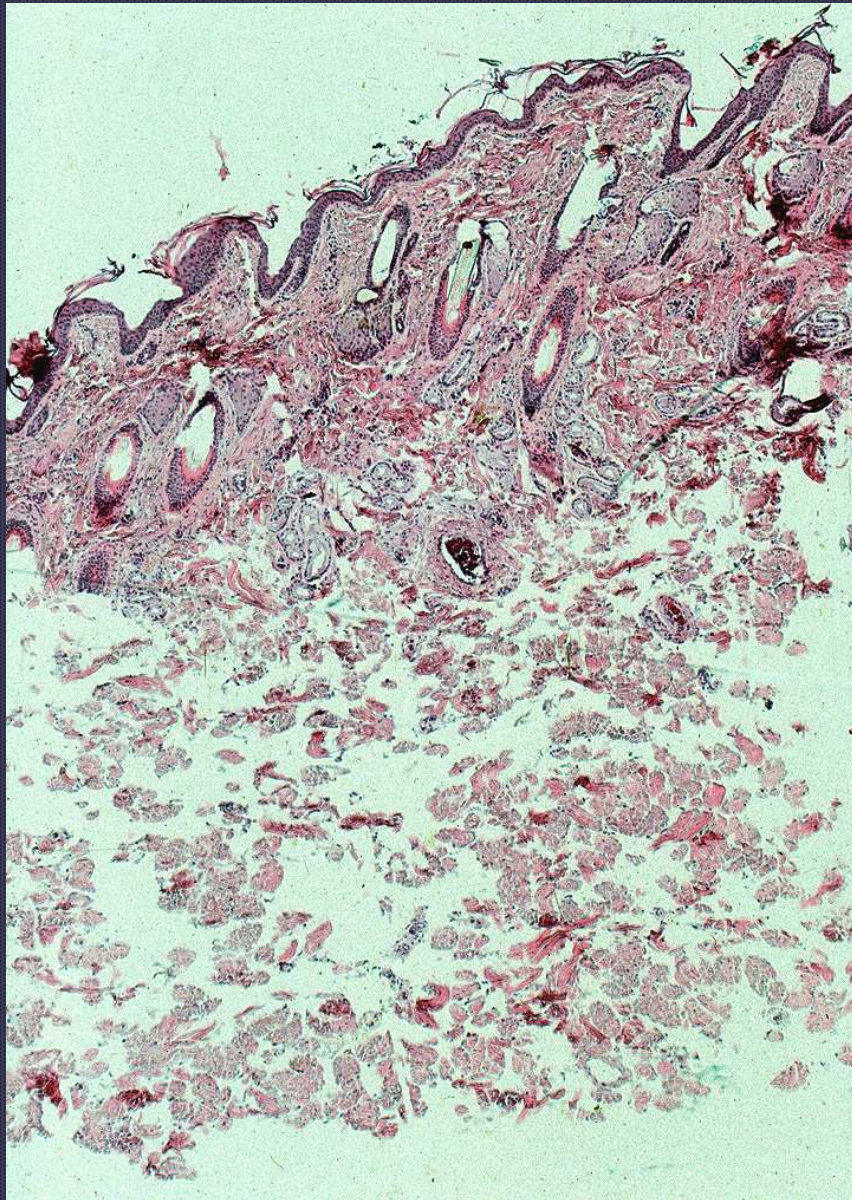
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Abstract This case report describes a distinctive deep cutaneous lesion in a 1-year-old Quarter Horse filly with hyperelastosis cutis. The horse had a typical clinical presentation of hyperelastic skin associated with a 6-month history of cutaneous wounds that developed following minor cutaneous trauma. Punch biopsies of skin from the affected horse were thinner than similar biopsies from an age- and breed-matched control. Significant microscopic lesions were not seen in cutaneous punch biopsies stained with haematoxylin and eosin and Masson's trichrome stains, but the ultrastructure of the dermis from the affected horse was characterized by variation in collagen fibre diameter and loose packing of collagen fibres within bundles. The horse was euthanized and necropsied, and full-thickness sections of skin were collected and examined microscopically. Affected skin was of normal thickness; however, the deep dermis contained a distinctive horizontal linear zone in which separation of collagen bundles resulted in the formation of large empty cleft-like spaces between the upper and lower regions of the deep dermis. We suggest the term 'zonal dermal separation' for this microscopic lesion. Incisional full-thickness skin biopsies should be taken in suspected cases of equine hyperelastosis cutis because punch biopsies may not obtain enough deep dermis to adequately represent pathological change in the skin of horses with this disorder.

Keywords: connective tissue disease, equine, hereditary disease, hyperelastosis cutis, Quarter Horse.



**Poorly organized collagen
fibers in mid- to deep dermis**



**Normal-staining collagen with
Masson's Trichrome**