

Classic Skin Findings of Scurvy

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A 43-year-old man with a long history of alcohol abuse presented with altered mental status, confabulation, and rash. He had perifollicular, hyperkeratotic papules and corkscrew hairs over his forearms, thighs, and upper abdomen (Figures 1 and 2), as well as gingival bleeding. A skin biopsy specimen revealed perifollicular fibrosis associated with perifollicular hemorrhage (Figure 3) consistent with a diagnosis of scurvy.¹ The patient was treated with 500 mg of ascorbic acid daily, and the rash resolved after 1 week of treatment. His neurologic symptoms were subsequently determined to stem from Wernicke encephalopathy, which was caused by a coexistent thiamine deficiency.

Scurvy is caused by a deficiency of ascorbic acid, which is necessary for the formation of mature collagen. Ascorbic acid is found in fruits, vegetables, and vitamin supplements, and deficiency is rare in the United States. Historically, scurvy was common in sailors, who lacked access to fresh fruits and vegetables during long sea voyages. In the 19th century, British sailors were given compulsory doses of lemon juice each day to prevent scurvy.²

Cutaneous manifestations of scurvy include easy bruising, corkscrew and swan neck hairs, and spontaneous breakdown of old wounds. Follicular hyperkeratosis and perifollicular hemorrhages are pathognomonic examination findings. Our patient's plasma ascorbic acid concentration was undetectable, but plasma measurements may be falsely normal despite deficient total body stores if ascorbic acid was recently ingested. Patients with scurvy should be evaluated for other vitamin deficiencies that commonly coexist, as demonstrated in our case. With treatment, scurvy rapidly improves in days to weeks.

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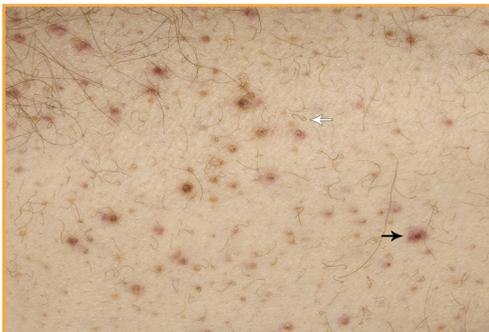


FIGURE 1. Hair shaft abnormalities seen in scurvy (white arrow). Perifollicular hyperkeratosis and hemorrhage (black arrow).



FIGURE 2. Perifollicular, hyperkeratotic papules.

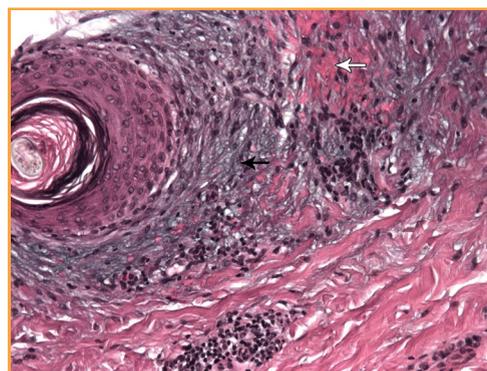


FIGURE 3. Perifollicular fibrosis (black arrows) associated with perifollicular hemorrhage (white arrows). Hematoxylin-eosin, original magnification $\times 400$.

1. Hirschmann JV, Raugi GJ. Adult scurvy. *J Am Acad Dermatol.* 1999;41(6):895-906.
2. Baron JH. Sailor's scurvy before and after James Lind: a reassessment. *Nutr Rev.* 2009;67(6):315-332.