

# Photo Quiz

## Progressive Hair Loss

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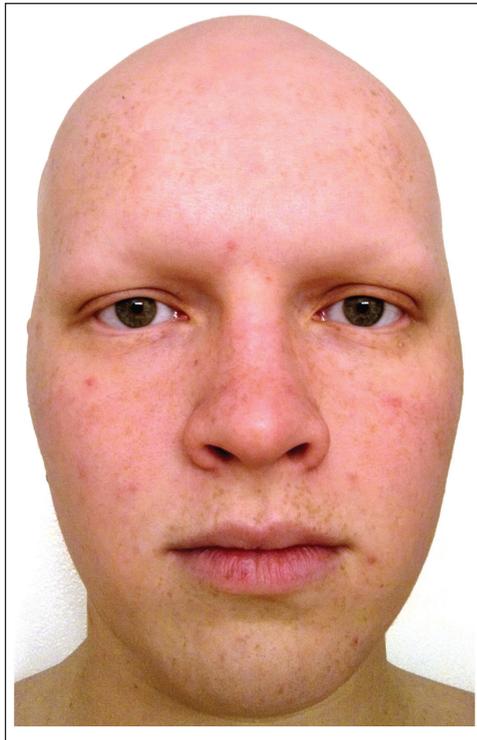


Figure 1.

A 22-year-old active-duty service member presented with gradually progressive patchy hair loss on the scalp that began six weeks earlier. He was given intralesional steroid injections to decrease the hair loss. He returned six months later with widespread hair loss over his scalp and body, with minor sparing of the axillae and pubic region. After a two-month course of sulfasalazine (Azulfidine), his symptoms did not improve, and he had complete hair loss. He had a history of patchy hair loss five years earlier. He was otherwise healthy.

On physical examination, there was no hair noted anywhere on his body (*Figure 1*). The nail plates had a rough surface with



Figure 2.

longitudinal ridging (*Figure 2*). There was no visible scarring around the hair follicles. Laboratory examination revealed normal thyroid test results, and normal serum testosterone and estrogen levels.

### Question

Based on the patient's history and physical examination findings, which one of the following is the most likely diagnosis?

- A. Alopecia totalis.
- B. Alopecia universalis.
- C. Androgenetic alopecia.
- D. Cicatricial alopecia.

See the following page for discussion.

**Discussion**

The answer is B: alopecia universalis. The patient initially had alopecia areata of the scalp, which generally consists of patchy, discrete areas of gradual hair loss developing over several weeks.<sup>1</sup> Approximately 10% of patients with alopecia areata progress to complete loss of scalp hair (alopecia totalis) or of scalp and body hair (alopecia universalis).<sup>2</sup> Many patients with alopecia areata develop nail abnormalities, such as nail pitting (most common), trachyonychia (roughening of the nail plate), and onychorrhexis (longitudinal fissuring of the nail plate).<sup>3</sup> Alopecia areata is associated with autoimmune thyroiditis.<sup>4</sup>

Androgenetic alopecia, also known as male pattern hair loss, is the progressive loss of terminal hairs on the scalp in a characteristic distribution involving the anterior, mid-, and temporal scalp, and the vertex of the scalp.<sup>5</sup> Dihydrotestosterone is the key

androgen involved in male androgenetic alopecia.<sup>6</sup>

Cicatricial alopecia is the result of secondary peribulbar inflammation that can be caused by several different conditions, including lichen planopilaris, discoid lupus erythematosus, and folliculitis decalvans. Unlike alopecia areata, cicatricial alopecia is characterized by scarring and permanent destruction of hair follicles, with loss of follicular orifices.<sup>7</sup>

The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Department of the Air Force, Department of the Army, Department of the Navy, Department of Defense, or the U.S. government.

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**Summary Table**

Condition	Characteristics
Alopecia totalis and alopecia universalis	Alopecia areata (patchy, discrete areas of hair loss on the scalp) that progresses to complete loss of scalp hair (alopecia totalis) or of scalp and body hair (alopecia universalis); nail abnormalities are common
Androgenetic alopecia	Progressive loss of terminal hairs on the scalp in a characteristic distribution involving the anterior, mid-, and temporal scalp, and the vertex of the scalp; also called male pattern hair loss
Cicatricial alopecia	Scarring and permanent destruction of hair follicles, with loss of follicular orifices, as a result of secondary peribulbar inflammation