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What is the best diagnostic approach to alopecia in women?

Evidence-based answer

It's unclear what the best approach is given the lack of studies on this issue. Indirect evidence and expert opinion indicate that a careful history and thorough physical examination usually suggest the

underlying cause of alopecia. Ancillary laboratory evaluation and scalp biopsy are sometimes necessary to make or confirm the diagnosis (strength of recommendation: **C**, expert opinion).

Clinical commentary

Scarring or nonscarring, that's the question

In my experience, evaluation of hair loss in women almost always fails to turn up a cause, and the alopecia typically resolves spontaneously within 6 to 12 months. I agree that the most useful investigations for ruling out specific etiologies are the history and physical examination.

The most important characteristic to evaluate is whether it is scarring or nonscarring. Scarring alopecia generally necessitates a biopsy. Identifying diffuse vs focal alopecia can further narrow the differential diagnosis.

The typical patient has diffuse, nonscarring hair loss in no defined pattern (central thinning suggestive of androgenic alopecia). Consider telogen effluvium as the likely diagnosis. It can result from chronic illness, postpartum state, recent

surgery/anesthesia, rapid weight loss, diet (iron deficiency, vitamin A toxicity, and protein deficiency), thyroid disease, or medications. Many commonly prescribed drugs can cause hair loss, including anticoagulants, nonsteroidal anti-inflammatory drugs, β -blockers, H_2 blockers, hormones, retinoids, and antihyperlipidemic agents.

Educating the patient, checking directed laboratory values occasionally, or modifying certain medications is often all that's needed to reassure women with alopecia. Persistent, progressive scarring or patchy alopecia requires further investigation and possible dermatologic consultation.

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FAST TRACK

Careful history and thorough physical examination usually suggest the underlying cause of alopecia.

Evidence summary

Our comprehensive literature search found no systematic reviews, randomized trials, or prospective cohort studies that answer this question. The differential diagnosis of clinical hair loss is large

(**TABLE**). We reviewed indirect evidence and expert opinion to answer this Clinical Inquiry.

Clues in the history

A detailed history—including medica-



TABLE

Causes of nonscarring alopecia

COMMON	LESS COMMON
Alopecia areata	Human immunodeficiency virus
Androgenetic alopecia	Hyperthyroidism
Drugs and other chemicals	Hypothyroidism
Telogen effluvium (both acute and chronic)	Iron deficiency
Tinea capitis	Nutritional deficiencies
Traction alopecia	Other systemic diseases
	Secondary syphilis
	Systemic lupus erythematosus
	Trichotillomania

Adapted from: Habif TP. *Clinical Dermatology. A Color Guide to Diagnosis and Therapy*. 4th ed. Edinburgh: Mosby; 2004:838-842.

tion use, systemic illness, endocrine dysfunction, hair care practices, severe diet restriction, and family history—is key to establishing an accurate diagnosis of alopecia.¹ Other significant considerations include the onset, duration, and pattern of hair loss; whether hair is broken or shed at the root; and whether shedding or thinning has increased.^{1,2} It's also important to ascertain whether hair loss is limited to the scalp or affects other areas of the body.

A family history of alopecia areata or androgenic alopecia can point to a genetic cause. Acne or abnormal menses can indicate androgen excess, suggesting androgenic alopecia. Positive answers to thyroid screening questions can point to hypothyroidism, and abnormal diet patterns can suggest iron-deficiency anemia. Unusual hair care practices can cause traction alopecia.¹

3 stages of the physical exam

All hair-bearing sites should be examined. Clinical examination should be performed in 3 stages:^{1,2}

- Inspect the scalp for inflammation, scale, and erythema to determine whether scarring is present.
- Examine the hair density and distribution pattern.
- Study the hair shaft quality, look-

ing at caliber, fragility, length, and shape.

The “pull test” is often used to assess ongoing hair loss. If more than 10% of hairs are pulled away from the scalp, the test is positive, suggesting active hair shedding.¹

Beyond the history and physical

Ancillary laboratory evaluation is sometimes necessary if the diagnosis remains unclear.^{1,2} Serum ferritin or a complete blood count can be useful to look for iron-deficiency anemia; a thyroid-stimulating hormone test can rule out hypothyroidism.³ According to 1 small study of 50 women with diffuse alopecia, thyroid tests are not routinely warranted without supportive clinical signs.⁴

Check free testosterone, androstenedione, and dehydroepiandrosterone if virilizing signs are present, to assess hyperandrogenism.^{1,3} Serum prolactin can be useful if the patient has galactorrhea.⁵ Also, consider a Venereal Disease Research Laboratory test to rule out syphilis.^{2,6}

No evidence suggests that low serum zinc concentrations cause hair loss. In fact, excessive intake of nutritional supplements may lead to hair loss and aren't recommended in the absence of a proven deficiency.⁷

FAST TRACK

Scarring alopecia almost always necessitates a biopsy.

CONTINUED



If a patient has scarring alopecia, a scalp biopsy is almost always necessary to make a diagnosis.¹ Usually a punch biopsy is sufficient, but it should be no smaller than 4 mm. The preferred location is the central scalp in an area representative of the hair loss.^{1,5}

Recommendations

The University of Texas Family Nurse Practitioner Program recommends a thorough history and physical examination and, if indicated, selected laboratory evaluation.⁶ The program states that the Women's Androgenetic Alopecia Quality of Life (WAA-QOL) Questionnaire is useful in evaluating health-related quality of life specific to women.

The American Hair Loss Association recommends checking some screening labs on women with hair loss, but states that the diagnosis is usually a process of elimination as many of the laboratory tests mentioned above will come back in the normal range.⁸ ■

References

1. Shapiro J, Wiseman M, Lui H. Practical management of hair loss. *Can Fam Physician*. 2000;46:1469-1477.
2. Thiedke CC. Alopecia in women. *Am Fam Physician*. 2003;67:1007-1014.
3. Chartier MB, Hoss DM, Grant-Kels JM. Approach to the adult female patient with diffuse nonscarring alopecia. *J Am Acad Dermatol*. 2002;47:809-818.
4. Dupont C. How far should we investigate diffuse alopecia in women? *Clin Exp Dermatol*. 1996;21:320.
5. Olsen EA, Messenger AG, Shapiro J, et al. Evaluation and treatment of male and female pattern hair loss. *J Am Acad Dermatol*. 2005;52:301-311.
6. University of Texas at Austin, School of Nursing, Family Nurse Practitioner Program. Recommendations to diagnose and treat adult hair loss disorders or alopecia in primary care settings (non pregnant female and male adults). Austin, TX: University of Texas at Austin, School of Nursing; May 2004. 21 p. 1-8. Available at: [www.ngc.gov/summary/summary.aspx?doc_id=5428&nbr=003722&string=alopecia+and+\(diagnosis+or+evaluation\)](http://www.ngc.gov/summary/summary.aspx?doc_id=5428&nbr=003722&string=alopecia+and+(diagnosis+or+evaluation)). Accessed January 9, 2007.
7. Rushton DH. Nutritional factors and hair loss. *Clin Exp Dermatol*. 2002;27:396-404.
8. Women's hair loss/diagnosis. American Hair Loss Association [database online]. Updated March 11, 2005. Available at: http://www.americanhairloss.org/women_hair_loss/diagnosis.asp. Accessed June 10, 2009.

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