

## Approaching the Patient With Female Pattern Hair Loss

Proper evaluation is essential to differentiate androgenetic alopecia from other forms of hair loss and set the stage for effective management.

### A Q&A WITH WILMA BERGFELD, MD



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#### When a female patient presents with a complaint of hair loss, what are some of the key clinical features you look for during the evaluation?

**Dr. Bergfeld:** There are many causes of hair loss, so it is important to establish a diagnosis for each patient. When a patient comes in and says, "I'm losing my hair," the dermatologist has to spend some time figuring out what the patient is talking about. Sometimes they have a progressive thinning of the scalp with no additional extra hair loss. Sometimes they're losing 300 to 400 hairs a day. Sometimes the hair is breaking, but the patient's sense is that it isn't growing and it's thinning. And sometimes one hair lost is too much for that patient.

Once you assess the degree of hair loss, the second consideration is when the hair loss began. Generally speaking with hair loss, the patient can put some type of date on when it began. It doesn't have to be a specific day, but most patients will identify spring, fall, winter, of a particular year.

I also ask patients if the hair loss has gotten better at any time. If so, what had they done or what was going on at the time? This is part of a good medical history that also includes drug history and allergies.

Anything that inflames the scalp can induce a shed. This includes any disease, any drug, mental health, or surgery—anything that traumatizes the equilibrium of the individual. Anxiety is also an important consideration.

Nutrition is another significant issue, especially in young women who are shedding, and this must also be assessed.

While the presence of poor nutrition, anxiety, or inflammation can worsen hair loss associated with androgenetic alopecia

#### FEMALE ANDROGENETIC ALOPECIA<sup>1,2</sup>

- Female androgenetic alopecia (AGA) or female pattern hair loss involves progressive hair loss characterized by increased thinning over the frontal/parietal scalp with greater density over the occipital scalp, retention of the frontal hairline, and the presence of miniaturized hairs.
- Prevalence increases with age, but AGA may start at puberty.

(See callout box above), the primary element distinguishing androgenetic alopecia is heredity. Question patients about hair loss in immediate family members—same-generation, as well as previous generations on both the maternal and paternal side.

Quality of hair is also affected in androgenetic alopecia. In addition to a thinning volume of scalp hair, patients with androgenetic alopecia may report that the texture of their hair may be changing: Whereas it was coarse, now it's finer. This is of consequence, because finer hair is thinner in its diameter and doesn't cover as much scalp area as well.

Although androgenetic alopecia becomes more prevalent with age (Table 1), some patients have onset of hair loss at puberty when the adrenal androgen dehydroepiandrosterone sulfate

### Androgen Excess

#### Common Circulating Androgens

<p><b>DHEAS</b> Testosterone, total &amp; free Androstenedione DHT FAI</p>	<ul style="list-style-type: none"> <li>• <b>DHEAS elevation &lt; 50%</b></li> <li>• Testosterone (free/total) &lt; 20%</li> <li>• Androstenedione &lt; 5%</li> <li>• Prolactin 2%</li> <li>• Other androgens &lt; 2%</li> </ul>
<p><b>SHBG</b> FAI 3 a diol ? Estradiol Prolactin FSH LH 17-OH</p>	<p><b>Progesterone</b> Cortisol ACTH Insulin 2 hr G TT HbA1C Lipid profile Ovarian ultrasound</p>

Stimulation tests  
Cortisol & Gonadotrophin  
**(increase detection by 30%)**

Combined best diagnosis  
**Androgen Excess**

Courtesy of Wilma Bergfeld, MD

**TABLE 1. PERCENTAGE OF WOMEN AFFECTED BY ANDROGENETIC ALOPECIA**

• Age 70+: 40-50%	• Ages 20-30: 6-12%
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(DHEAS) is elevated. We begin to see acne, increased body hair, and scalp hair loss, which all appear to be hormone driven. We have in this situation sometimes the beginnings of androgen excess or elevated circulating androgens. These patients represent probably a third of the individuals that we diagnose with androgenetic alopecia. And they can be picked up early with appropriate laboratory testing.

### What aspects of nutrition affect hair loss?

**Dr. Bergfeld:** We use appropriate laboratory testing to assess nutrition, particularly looking at ferritin, iron stores, and blood counts. We look at vitamin D—we have a massive population that is vitamin D deficient. We look at zinc and protein. Because vitamin A and D receptor sites are together, if one is down the other is usually down as well. Therefore, we also look at vitamin A.

We make those assessments here at the Cleveland Clinic and if patients are low we supplement them. If patients don't respond to supplementation, we engage internists to help find out why they're not absorbing the drug, why their anemia persists.

All these nutrients I've mentioned are essential for hair growth. The hair follicle in its growing stage is a factory utilizing these particular minerals, hormones, et cetera. When they are not fed this, they do not grow good hair. It's like the fertilizer is gone.

One must assess these factors clinically because, even though you can't change the genetic predisposition, if you identify and improve confounding factors, hair loss may stabilize. In the patient with androgenetic alopecia, proper nutrition will support strategies of camouflage and treatment of hair loss.

### What are other clinical considerations?

**Dr. Bergfeld:** The majority of patients want to improve the appearance of hair loss. As noted, addressing confounding factors can stabilize loss, and there are targeted treatment options to potentially regrow hair. Patients should also receive counseling on camouflage techniques. Hairstyle (especially curl) and color can be very helpful in minimizing the appearance of hair loss.

In treating hair loss, patient photographs are standard. Generally speaking, a clinical photograph of the part should be taken using a standardized methodology, including lighting and distance, so that one can compare the pictures over time.

We are now moving to the videoscope, which has a dermatoscope on it with powerful magnification. It allows you to see the hair fibers and actually count and measure.

Patient education is important. Treatment for female androgenetic alopecia should be initiated as early as possible. When instituting medical therapy, patients should be counseled about the

### Female Pattern Hair Loss



Courtesy of Wilma Bergfeld, MD

anticipated time to see results and the time to maximum benefit. With topical minoxidil, for example, I tell patients that under magnification we could see some regrowth in three months, but the patient will be able to see results in four to six months, as hair begins to grow and gain some length. The effect of treatment maxes out at about one year, but continuous use of minoxidil is required to maintain results.

Additionally, within the first two weeks or two months of use, topical minoxidil can initiate a shed. Generally speaking, that's just a recycling problem and that does recover and the hair grows after that. Similarly, if patients are off the drug for two to four weeks, they can have a precipitous hair loss.<sup>1</sup> The individual using minoxidil needs to be counseled that this is a long-term therapy.

It's helpful when recommending a treatment regimen to understand and consider the patient's hair grooming practices. In addition to topical therapies, we can recommend shampoos and other hair care products. Women may shampoo their hair or go to the beauty parlor one to three times a week, and they may be reluctant to apply products when they have not shampooed. Patients need counseling about the importance of adherence if they wish to see results.

### What treatments are approved for female androgenetic alopecia?

**Dr. Bergfeld:** Minoxidil (2% BID or 5% QD) is the only FDA-approved drug for female androgenetic alopecia. The only other FDA-approved treatment is the HairMax low light laser.

Many oral drugs have been used for androgenetic alopecia, including oral contraceptives, spironolactone, and cyproterone acetate; All have all shown some utility in small trials, but have not been investigated in large, randomized trials.<sup>1,3</sup> Topical ketoconazole-based shampoos have also demonstrated some benefit.<sup>1</sup> ■

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