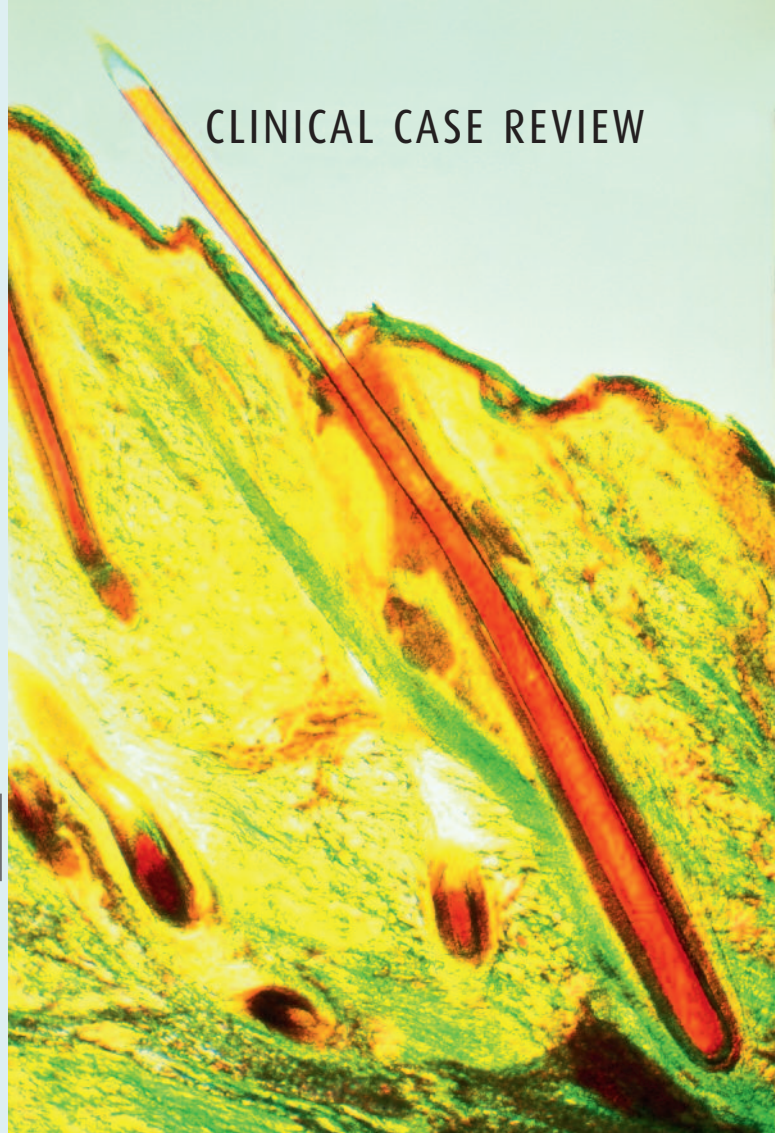


Excessive scalp hair thinning in a middle-aged woman

Commentary by

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Is bilateral recession and major hair loss in the central scalp region in a postmenopausal woman a case of female pattern hair loss?

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CASE SCENARIO

Vera is a 56-year-old woman who has been concerned about the excessive thinning of her scalp hair over the preceding 12 months. Examination revealed that she has a receding hair-line bilaterally and major hair loss over her central scalp.

Her scalp appears healthy, she is otherwise well, her thyroid function tests are normal and she passed through a trouble-free menopause five years previously. She takes no medications.

Why is this happening to Vera and can she be helped to regrow her hair?

COMMENTARY

Vera has androgenetic alopecia, or common balding. This produces hair loss in a reproducible pattern called female pattern hair loss (FPHL).¹ The hair loss can be graded clinically using the Sinclair scale (Figure).²

The pattern of hair loss in women is different than that in men. In general, women with FPHL present with increased hair shedding or a diffuse reduction in hair volume over the mid-frontal scalp, or both.³ Deep bitemporal recession is usually absent or mild in women, although it does occur in this case, and vertex balding is rare. (Bitemporal recession and vertex balding are the characteristic features of male pattern baldness.)

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FEMALE PATTERN HAIR LOSS – THE SINCLAIR SCALE

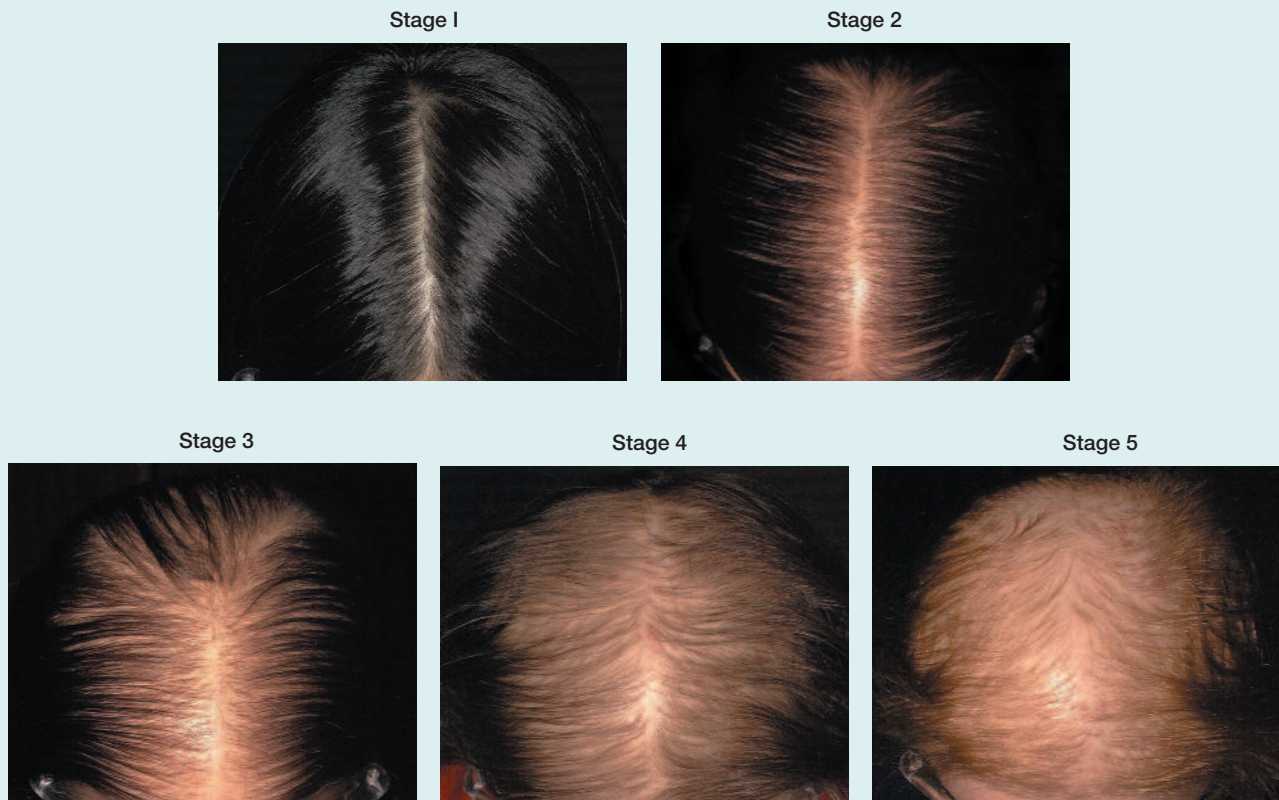


Figure. Sinclair scale for female pattern hair loss. Stage 1 (top left) is normal. Stage 2 (top right) shows widening of the central part. Stage 3 (above left) shows widening of the central part and loss of volume lateral to the part line. Stage 4 (above centre) shows the development of a bald spot anteriorly. Stage 5 (above right) shows advanced hair loss.

A useful question to ask is: ‘When you tie your hair back in a pony tail, how thick is your pony tail compared to before you started losing hair?’ Women often underestimate the severity of their hair loss.⁴

Prominent recession of the entire frontal hairline, possibly extending above the ears, may be seen in postmenopausal women. This condition, called frontal fibrosing alopecia, produces a cicatricial alopecia, and eyebrow loss is almost universal. It is thought to be a variant of lichen planopilaris, and does not appear to be related to androgenetic alopecia. There is no effective therapy available as yet for frontal fibrosing alopecia.⁵

So-called senescent or age-related alopecia has been postulated as a distinct entity but evidence for this is lacking.⁶ Chronic telogen effluvium (CTE) is an important differential diagnosis in women with increased hair shedding but no visible baldness.⁷ It is a distinct clinical entity that does not evolve into FPHL and is due to a variance in the range of anagen duration rather than shortening of anagen, as seen in FPHL.⁸ CTE can be excluded in this case.

Female pattern hair loss

FPHL is common and has a negative impact on a woman’s quality of life.⁹ In

Australia, there are estimated to be about 700,000 women with Sinclair scale stage 3 severity hair loss.¹⁰

FPHL has a complex polygenetic aetiology, being associated with several genes involved in androgen metabolism or oestrogen activity, including those for oestrogen receptor beta and aromatase.^{11,12} Epigenetic phenomenon are also likely to be involved.¹³ Androgen binding to hair follicle androgen receptors is important in the pathogenesis.¹⁴

Systemic androgen excess (virilisation or iatrogenic), thyroid disease and iron deficiency are potential aggravating factors that accelerate hair loss. Treatment of

thyroid disease or iron deficiency alone will not regrow hair.¹⁵

Treatment of FPHL involves use of oral antiandrogens such as spironolactone or cyproterone acetate to arrest progression of hair loss, and use of topical minoxidil 2% or 5% solution to stimulate hair regrowth.^{14,16} The usual dosage of spironolactone is 100 mg daily, and of cyproterone acetate 50 mg daily for 10 days per month. With use of spironolactone, cyproterone or minoxidil, regrowth is at best partial, and most women will only improve a single stage on the Sinclair scale. These drugs are generally well tolerated, with minimal monitoring required.

Spironolactone is also a diuretic and antihypertensive, and may cause potassium retention, especially in the context of renal impairment or use of NSAIDs or ACE inhibitors. Hives is a rare but well-reported potential side effect of spironolactone. Cyproterone acetate generally causes menstrual irregularity and is prescribed together with a combined oral contraceptive pill. Both spironolactone and cyproterone acetate are potentially teratogenic and women should be advised to stop these medications one month in advance of a planned conception.

Minoxidil may cause scalp irritation or hypertrichosis on the forehead. With minoxidil, improvement generally takes six to 12 months and maintenance therapy is required.

In my experience, while there are anecdotal reports of success,¹⁷ the 5 α -reductase inhibitors finasteride and dutasteride that are used to treat male pattern hair loss are less useful in women. Both agents are contraindicated in pregnancy and have long biological half-lives. **MT**

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COMPETING INTERESTS: Professor Sinclair holds the following patents: 'Implantation of long acting formulation of 5 alpha reductase inhibitor to prevent prostate cancer, prostate hypertrophy, hirsutism, male and female pattern hair loss (androgenetic alopecia)', invented by Sinclair, Rodney Daniel. Innovation Patent for eight years from 29 May 2009; and 'Treatment of male and female androgenetic alopecia with oral minoxidil either alone or in combination with antiandrogens', invented by Sinclair, Rodney Daniel. Innovation Patent for a term of eight years from 26 July 2011.



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