

Treatment-Induced Hair Shedding (Dread Shed) Associated with Androgenetic Alopecia Therapies

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ABSTRACT

Treatment-induced hair shedding, or “dread shed,” is an often discussed yet poorly defined phenomenon in androgenetic alopecia (AGA) management. Shedding was most consistently reported with topical and oral minoxidil, attributed to premature anagen induction or stress-induced telogen effluvium. Evidence for shedding with antiandrogens is limited, while platelet-rich plasma with microneedling and light based therapies were rarely associated. Nutraceutical trials generally showed improved hair parameters without a clear shedding phase, though early shedding may be underrecognized due to delayed efficacy assessments. Despite its prevalence in social media, “dread shed” remains underrepresented in literature, highlighting the need for further research to guide patient counseling.

BACKGROUND

Treatment-induced hair shedding, or “dread shed,” is a distressing yet anticipated response following initiation of certain therapies for androgenetic alopecia (AGA) and may lead to premature treatment discontinuation (Figure 1). Although widely discussed on social media, its underlying pathophysiology is not well defined. Current hypotheses suggest transient displacement of telogen hairs due to follicular cycle synchronization or hormonal perturbations. Despite its clinical importance, the phenomenon is underrepresented in the literature, limiting evidence-based guidance for patient counseling.

METHODS

A targeted PubMed search was performed. The authors' expert clinical opinions were also included.

RESULTS

Articles screened: 67. Articles that met screening criteria: 21.

RESULTS (CONT.)

Minoxidil (Oral and Topical): Hair shedding with topical and oral minoxidil was commonly reported, attributed either to follicular cycle synchronization with early anagen induction or to stress-induced telogen effluvium.

Antiandrogens (spironolactone, finasteride, dutasteride): Randomized clinical trials (RCTs) on dutasteride and finasteride showed increased hair counts at weeks 12 and 24 but did not describe a distinct hair shedding phase prior to this.

Platelet rich plasma & Microneedling: One study reported 3 cases of transient effluvium among 210 patients that underwent platelet rich plasma (PRP) with microneedling (MN) occurring 4-6 weeks post-treatment and resolving by week 8. The transient effluvium after PRP was attributed to the induction of the anagen phase secondary to growth factors.

Nutraceuticals: RCTs on nutraceuticals demonstrated improvements in terminal hair counts, reductions in hair shedding, and increase in vellus hair counts in the initial 3 and 6 months of treatment. None of the studies described a distinct hair shedding phase.

Light Based Therapies: RCTs on low level light therapy (LLLT) did not report any adverse effects and did not mention an increase in hair shedding. One RCT reported a mild, transient hair shedding phase in a 24-week trial among participants using a helmet-type LLLT device.



Figure 1
Treatment-Induced Hair Shedding with AGA Therapies.

DISCUSSION (CONT.)

The “dread shed” pathophysiology remains ill-defined but remains clinically significant. Most evidence exists for both topical and oral minoxidil, where hair shedding is well described and thought to be due to early anagen induction and subsequent shedding of hairs at telogen stage. Alternatively, it may be a negative effect of stress-induced telogen effluvium.

Evidence for a shedding phase with antiandrogens is lacking, though a transient effluvium would be expected in theory as hormone levels shift.

PRP and MN may cause transient effluvium through growth factor driven follicular activation, though reports are rare. LLLT may also lead to hair shedding in the initial phase.

Trials on nutraceuticals showed an increase in terminal hair count and a reduction in hair shed count, along with an increase in vellus hair count in the initial 3 month and 6 month treatment period. These findings may suggest that nutraceuticals may be less likely to induce transient effluvium secondary to a gentle modulation of hormones and a subtle change in environment that is not enough to resynchronize the hair follicle cycle. In most of these studies, however, efficacy measurements did not occur until at least 90 days after start of treatment, so early shedding may be under-recognized due to delayed efficacy assessments.

Despite its clinical relevance and frequent discussion on social media, “dread shed” remains poorly characterized in the literature, highlighting the need for more studies.

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