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Early-Onset Androgenetic Alopecia in Young Indian Males: A Teledermatology-Based Audit with Insights into Treatment Barriers and OTC Product Misuse

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***Abstract*— Background: Androgenetic alopecia (AGA) is a common dermatologic concern in young Indian males, increasingly managed through telemedicine. This study explores patterns in diagnosis, treatment, and patient beliefs based on a clinical audit.**

Methods: A retrospective review of 20 male patients with AGA who presented via teleconsultation in June 2025. Data included age, treatment advised, follow-up status, and patient-reported concerns.

Results: Most patients were aged 23–32, and 55% presented with stage 3 AGA. Common treatments included topical minoxidil, oral minoxidil, and biotin supplements. Oral minoxidil was withheld in select cases due to clinical contraindications. Lifestyle factors such as stress, poor sleep, and smoking were common among early-onset cases. Approximately 70% of patients reported early onset of hair loss, and 86% among them had identifiable lifestyle-related contributing factors. Follow-up occurred in 45% of cases within 3–4 weeks.

Conclusion: Telemedicine offers efficient diagnosis of AGA, but long-term success depends on patient counseling and lifestyle modification.

Keywords: Androgenetic alopecia, teledermatology, early-onset baldness, treatment barriers, lifestyle factors.

I. INTRODUCTION

Androgenetic alopecia (AGA) is the most common form of hair loss in men, affecting nearly 50% of males by age 50. In the Indian population, AGA has significant psychosocial impact, particularly among young adult males. With the rise of telemedicine, general practitioners are increasingly diagnosing and managing AGA at early stages. A notable trend among Indian male patients is the perception of earlier onset than their male relatives. This paper presents a short-term audit of 20 AGA cases and discusses patient behaviors and emerging clinical challenges.

II. METHODS

This descriptive, retrospective audit was based on 20 male teleconsultation cases from June 2025. Diagnoses were based on clinical pattern recognition, patient images and history. Collected data included age, AGA stage, treatment advised, follow-up status, OTC product use, and lifestyle factors. No patient-identifiable data was recorded. This study represents real-world observational data from a single consulting physician practicing via a telemedicine platform.

III. RESULTS

Patient ages ranged from 20 to 45 years, with most between 23–32 years. AGA staging was: stage 2 (15%), stage 3 (55%), stage 4 (25%), and stage 5 (5%). Treatment included topical minoxidil (90%), oral minoxidil (60%), biotin supplements (70%), and dermaroller (30%). Oral minoxidil was withheld in 4 cases due to contraindications. 45% of patients returned for follow-up within 3–4 weeks. Lifestyle issues associated with early onset included irregular sleep, stress, smoking, and poor diet. Approximately 70% of all patients reported early onset of hair loss as compared to their male relatives, and 86% among these patients had identifiable lifestyle-related contributing factors.

IV. DISCUSSION

This short-term teleconsultation audit highlights an increasingly observed trend in Indian men: early-onset androgenetic alopecia (AGA) in their 20s and early 30s. While AGA is fundamentally genetic, over half of the patients in this study reported balding significantly earlier than their fathers or male relatives — suggesting a possible epigenetic or lifestyle-mediated shift in clinical onset.

Multiple modifiable lifestyle contributors were consistently noted, including poor sleep cycle (night shifts, screen time), chronic stress (academic, work-related), sedentary habits, poor diet, tobacco and alcohol use.

These observations are supported by recent studies that draw a strong connection between early-onset AGA and metabolic syndrome, insulin resistance, and inflammatory pathways [2, 4]. Nath et al. (2018) found early-onset AGA to be significantly more prevalent among Indian males with features of metabolic syndrome, suggesting a

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pathophysiological overlap [2]. Similarly, Rathnayake et al. (2021) reported a link between AGA and insulin resistance, reinforcing the influence of modern lifestyle on hair loss progression [4].

In line with Trüeb's 2022 review, patients in this audit had comorbid behavioral and lifestyle risks — including sleep disturbance, smoking, and dietary deficiencies — all of which have been associated with early follicular miniaturization and hormonal dysregulation [3].

This anecdotal pattern of shift in onset of AGA aligns with findings from a Turkish study, which showed that men with a paternal history of AGA began balding at a mean age of ~30, compared to ~34 years in those without such history — indicating a trend toward earlier onset in subsequent generations.[5]

Additionally, pre-consultation behaviors revealed that a majority of patients had experimented with homemade or internet-based remedies, including onion oil, herbal concoctions, and OTC serums, often with no improvement. This delayed medical intervention and contributed to poor expectations about treatment efficacy.

Patients were managed using evidence-based protocols including topical minoxidil, oral minoxidil (where appropriate), biotin supplementation, and adjunctive measures like derma roller therapy. Oral minoxidil was not prescribed in patients with clinical contraindications — such as migraine, hypertension, GERD, or immunosuppressive therapy — reflecting safe prescribing standards.

In a few other cases, although oral minoxidil was appropriate, patients declined the treatment due to concerns about potential side effects or preference for beard-focused regimens. These patterns highlight the need for clear education to address hesitancy around systemic treatment options.

Encouragingly, 45% of patients followed up within 3–4 weeks, and many expressed awareness that AGA requires long-term, maintenance-based therapy, especially in relation to minoxidil. This highlights that, even via virtual platforms, appropriate counseling can shape realistic expectations and improve treatment continuity.

V. CONCLUSION

This audit of male AGA cases in a virtual care setting reveals a rising trend of early onset, shaped by both genetics and lifestyle factors. Many patients arrive after trying unproven homemade remedies and require clear, empathetic counseling about long-term management. Teledermatology enables early diagnosis and access to care. However, success depends not only on the prescription, but also on addressing lifestyle influences, patient fears, and setting expectations for consistent follow-up and maintenance therapy.

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