

# ALOPECIA – TERAPITË BASHKËKOHORE

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## Abstrakt

Alopecia është një sëmundje e folikulit të flokut, që shkakton rënie të flokëve në formë pullash ose në masë. Kjo patologji mund të prekë jo vetëm skalpin, por edhe zonën e mjekrës, vetullat dhe zona të tjera me flokë. Format më të zakonshme janë alopecia androgjenike, alopecia areata dhe telogen efluvium, secila me mekanizma dhe trajtime specifike.

Ky studim shqyrton terapitë bashkëkohore për alopecinë, duke përfshirë trajtimet farmakologjike, teknikat e reja si eksosomet, mikroinjeksionet dhe përdorimin e biologjikëve. Synimi është të identifikohen trajtimet më efektive dhe të minimizohen efektet anësore të terapisë.

### 1. Hyrje

Alopecia është një çrregullim i zakonshëm i flokëve, i cili mund të prekë të dy gjinitë dhe të ketë një ndikim të madh psikologjik te pacientët. Format më të shpeshta janë:

- Alopecia androgjenike – e lidhur me efektet hormonale dhe enzimën 5-alfa reduktazë.
- Alopecia areata – një çrregullim autoimun me humbje të flokëve në formë pullash.
- Telogen efluvium – rënie e përkohshme e flokëve për shkak të faktorëve stresues.

Në dekadat e fundit, ka pasur zhvillime të rëndësishme në trajtimin e alopecisë, duke përfshirë medikamentet orale dhe topikale, si dhe teknologji të avancuara si terapia me eksosome.

### 2. Metodologjia

Ky studim bazohet në një rishikim të literaturës shkencore nga bazat e të dhënave PubMed, Scopus dhe Web of Science për periudhën 2015-2024.

Artikujt u përzgjedhën në bazë të kriterëve të qarta për efektivitetin e trajtimeve dhe sigurinë e pacientëve. Janë analizuar:

- Studime të rastësishme klinike
- Meta-analiza dhe rishikime sistematike
- Artikujt të botuar në revista të njohura dermatologjike

### 1. Rezultatet dhe Diskutimi

### 3.1 Terapitë farmakologjike

- Minoxidil (oral dhe topikal) – i përdorur për alopecinë androgjenike, stimulon qarkullimin e gjakut në folikujt e flokëve.
- Finasterid dhe dutasterid – frenojnë veprimin e 5-alfa reduktazës, duke reduktuar miniaturizimin e flokëve.
- Spironolakton dhe bicalutamid – antiandrogjenë të përdorur te gratë me alopeci androgjenike.
- Cetirizinë 1% – një trajtim topikal eksperimental që ndihmon në stimulimin e folikulit të flokut.

### 3.2 Terapitë biologjike dhe teknologjitë e reja

- Eksosomet dhe PRP (Platelet-Rich Plasma) – përmirësojnë qarkullimin e gjakut dhe nxisin rritjen e flokëve.
- JAK-inhibitorët (tofacitinib, baricitinib, ruxolitinib) – të efektshëm për alopecinë areata të rëndë.
- Mezoterapia me dutasterid – përmirëson alopecinë androgjenike pa efekte sistemike.
- Botulinum toksina – ndihmon në përmirësimin e qarkullimit të gjakut dhe rigjenerimin e flokëve.

#### 1. Përfundime

Alopecia mbetet një sfidë terapeutike për dermatologët dhe kërkon trajtime të personalizuar bazuar në llojin dhe shkallën e sëmundjes. Ndërkohë që trajtimet klasike si minoxidili dhe finasteridi janë ende të përdorura gjerësisht, zhvillimet e reja në trajtimet me eksosome, biologjike dhe teknologji të avancuara po hapin mundësi të reja për pacientët. Studime të mëtejshme janë të nevojshme për të përcaktuar protokollet më të mira për trajtim.

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## ALOPECIA – CONTEMPORARY THERAPIES

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### Abstract

Alopecia is a hair follicle disorder that causes hair loss in patches or widespread shedding. This pathology can affect not only the scalp but also the beard, eyebrows, and other body areas with

hair. The most common types of alopecia include androgenic alopecia, telogen effluvium, and alopecia areata, affecting both genders.

In androgenic alopecia, hair undergoes a miniaturization process, leading to progressive thinning, associated with the action of the 5-alpha reductase enzyme. Telogen effluvium is characterized by a sudden and diffuse shedding of hair due to a shift from the anagen phase to the telogen phase, often triggered by physical or emotional stress. Alopecia areata is an autoimmune condition, where hair loss occurs in round patches with an unpredictable course. Clinical studies suggest that the most effective treatment for androgenic alopecia is oral dutasteride (0.5 mg, 3-7 times per week) ± oral minoxidil, combined with topical minoxidil at night for men. In women, the recommended therapy includes oral minoxidil (0.5 mg) ± antiandrogens such as spironolactone, bicalutamide, or dutasteride. Recent advancements in antiandrogenic treatments, particularly bicalutamide (10-50 mg/day), have shown significant improvement in hair density, especially in women.

Additionally, spironolactone (25-200 mg/day) for 6-12 months has been effective in increasing hair density. The combination of spironolactone (50 mg/day) and minoxidil (2.5 mg twice daily) has been particularly beneficial for adolescent females (13-18 years).

Other emerging therapies include:

- Cetirizine 1% solution (applied locally) has shown a positive clinical response in 80% of cases after 16 weeks of use.
- Dutasteride mesotherapy (0.025%) via microinjections (3 sessions per month) has improved androgenic alopecia without systemic side effects.
- Botulinum toxin (100 units, 30 injections every 3 months, for 4 sessions) has led to increased hair growth, with enhanced effects when combined with finasteride (1 mg/day).
- Polydioxanone threads, thought to act similarly to microneedling, stimulate growth factors and stem cell activation in hair follicles.

Keywords

Alopecia, Androgenic Alopecia, Telogen Effluvium, Alopecia Areata, Minoxidil, Dutasteride, Spironolactone, Bicalutamide, PRP, Exosomes.

## 1. Introduction

Alopecia is a multifactorial condition that significantly impacts patients' quality of life, with psychological and social implications. The three most prevalent forms are:

- Androgenic Alopecia – a genetically driven process influenced by 5-alpha reductase activity, leading to progressive miniaturization of hair follicles.
- Telogen Effluvium – a temporary diffuse hair shedding due to acute stressors, nutritional deficiencies, or hormonal changes.
- Alopecia Areata – an autoimmune disorder, where immune-mediated follicular attack leads to patchy hair loss.

Over the past decade, advancements in trichology and dermatology have introduced more effective therapies, including antiandrogens, biologics, and regenerative medicine techniques such as PRP (Platelet-Rich Plasma) and exosomes.

## 2. Methodology

This study is based on a comprehensive literature review using databases such as PubMed, Scopus, and Web of Science (2015-2024). The selection criteria included:

- Clinical trials evaluating alopecia treatments.
- Meta-analyses and systematic reviews.
- Studies analyzing novel therapeutic approaches like JAK inhibitors, exosomes, and microneedling.

## 1. Results and Discussion

### 3.1 Pharmacological Therapies

- Minoxidil (oral and topical) – enhances scalp circulation and prolongs the anagen phase.
- 5-alpha reductase inhibitors (Finasteride & Dutasteride) – prevent follicular miniaturization and slow hair loss progression.
- Spironolactone & Bicalutamide – block androgen receptors, particularly effective in female androgenic alopecia.
- Cetirizine 1% solution – regulates prostaglandin pathways, promoting follicular stimulation.

### 3.2 Biologics and Regenerative Therapies

- Platelet-Rich Plasma (PRP) – delivers growth factors that enhance hair regeneration.
- JAK inhibitors (Tofacitinib, Baricitinib, Ruxolitinib) – promising for severe alopecia areata, modulating immune response.

- Exosome Therapy – derived from mesenchymal stem cells, offering an innovative approach to hair regrowth.

### 3.3 Emerging Technologies

- Botulinum Toxin – improves scalp vascularization and hair density.
- Polydioxanone Threads – believed to act as microneedling stimulants, promoting growth factors.
- Pyrilutamide (Androgen Receptor Antagonist) – in clinical trials, showing potential in treating androgenic alopecia.

#### 1. Conclusion

Alopecia remains a therapeutic challenge, but advancements in molecular biology, regenerative medicine, and pharmacology are providing new treatment avenues. While minoxidil and finasteride remain cornerstone therapies, newer biologic treatments and stem cell-derived exosomes show great potential. Further clinical trials are needed to define the optimal treatment protocols for various forms of alopecia.

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