Therapeutic Approaches for Alopecia Areata in Children Aged 6 to 11 Years

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Pediatric alopecia areata (AA) is a chronic autoimmune disease of the hair follicles characterized by nonscarring hair loss. Its incidence in children in the United States ranges from 13.6 to 33.5 per 100,000 person-years, with a prevalence of 0.04% to 0.11%.[1] Alopecia areata has important effects on quality of life, particularly in children. Hair loss at an early age can decrease participation in school, sports, and extracurricular activities[2] and is associated with increased rates of comorbid anxiety and depression.[3] Families also experience psychosocial stress, often comparable to other chronic pediatric illnesses.[4] Thus, management requires not only medical therapy but also psychosocial support and school-based accommodations.

Systemic therapies for treatment of AA in adolescents and adults are increasingly available, including US Food and Drug Administration (FDA)–approved Janus kinase (JAK) inhibitors such as baricitinib, deuruxolitinib (for adults), and ritlecitinib (for adolescents and adults); however, no systemic therapies have been approved by the FDA for children younger than 12 years. The therapeutic gap is most acute for those aged 6 to 11 years, for whom the psychosocial burden is high but treatment options are limited.[3]

This article highlights options and strategies for managing AA in children aged 6 to 11 years, emphasizing supportive and psychosocial care (including camouflage techniques), topical therapies, and off-label systemic approaches.

Supportive and Psychosocial Care

Treatment of AA in children extends beyond the affected child to include parents, caregivers, and even school staff (eg, teachers, principals, nurses).[4] Disease-specific organizations such as the National Alopecia Areata Foundation (naaf.org) and the Children's Alopecia Project (childrensalopeciaproject.org) provide education, support groups, and advocacy resources. These organizations assist families in navigating school accommodations, including Section 504 plans that may allow children with AA to wear hats in school to mitigate stigma. Additional resources include handouts for teachers and school nurses developed by the Society for Pediatric Dermatology.[5]

Psychological support for these patients is critical. Many children benefit from seeing a psychologist, particularly if anxiety, depression, and/or bullying is present.[3] In clinics without embedded psychology services, dermatologists should maintain referral lists or encourage families to seek guidance from their pediatrician.

Camouflage techniques can help children cope with visible hair loss. Wigs and hairpieces are available free of charge through charitable organizations for patients younger than 17; however, young children often find adhesives uncomfortable, and they will not wear nonadherent wigs for long periods of time. Alternatives include soft hats, bonnets, scarves, and beanies. For partial hair loss, root concealers, scalp powders, or hair mascara can be useful. Temporary eyebrow tattoos are a good cosmetic approach, whereas microblading generally is not advised in children younger than 12 due to procedural risks including pain.

Topical Therapies

Topical agents remain the mainstay of treatment for AA in children aged 6 to 11 years. Potent class 1 or class 2 topical corticosteroids commonly are used, sometimes in combination with calcineurin inhibitors or topical minoxidil. Off-label compounded topical JAK inhibitors also have been tried in this population and may be helpful for eyebrow hair loss,[6] though data on their efficacy for scalp AA are mixed.[7] Intralesional corticosteroid injections, effective in adolescents and adults, generally are poorly tolerated by younger children and may cause considerable

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distress. Contact immunotherapy with squaric acid dibutyl ester or anthralin can be considered, but these agents are designed to elicit irritation, which may be intolerable for young children.[8] Shared decision-making with families is essential to balance efficacy, tolerability, and treatment burden.

Systemic Therapies

Systemic therapy generally is reserved for children with extensive or refractory AA. Low-dose oral minoxidil is emerging as an off-label option. One systematic review reported that low-dose oral minoxidil was well tolerated in pediatric patients with minimal adverse effects.[9] Doses of 0.01 to 0.02 mg/kg/d are reasonable starting points, achieved by cutting tablets or compounding oral solutions.[10]

In children with AA and concurrent atopic dermatitis, dupilumab may offer dual benefit. A real-world observational study demonstrated hair regrowth in pediatric patients with AA treated with dupilumab.[11] Immunosuppressive options such as low-dose methotrexate or pulse corticosteroids (dexamethasone or prednisolone) also may be considered, although use of these agents requires careful monitoring due to increased risk for infection, clinically significant blood count and liver enzyme changes, and metabolic adverse effects related to long-term use of corticosteroids.

Clinical trials of JAK inhibitors in children aged 6 to 11 years are anticipated to begin in late 2025. Until then, off-label use of ritlecitinib, baricitinib, tofacitinib, or other JAK inhibitors may be considered in select cases with considerable disease burden and quality-of-life impairment following thorough discussion with the patient and their caregivers. Currently available pediatric data show few serious adverse events in children—the most common included upper respiratory infections (nasopharyngitis), acne, and headaches—but long-term risks remain unknown. Dosing challenges also exist for children who cannot swallow pills; currently ritlecitinib is available only as a capsule that cannot be opened while other JAK inhibitors are available in more accessible forms (baricitinib can be crushed and dissolved, and tofacitinib is available in liquid formulation for other pediatric indications). Insurance coverage is a major barrier, as these therapies are not FDA approved for AA in this age group.

Final Thoughts

Alopecia areata in children aged 6 to 11 years presents unique therapeutic challenges. While highly effective systemic therapies exist for older patients, younger children have limited options. For the 6-to-11 age group, management strategies should prioritize psychosocial support, topical therapy, and low-burden systemic alternatives such as low-dose oral minoxidil. Family education, school-based accommodations, and access to camouflage techniques are integral to holistic care. The commencement of pediatric clinical trials for JAK inhibitors offers hope for more robust treatment strategies in the near future. In the meantime, clinicians must engage in shared decision-making, tailoring therapy to the child's disease severity, emotional well-being, and family priorities.

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