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COMMENTARY

Measuring the impact of alopecia areata

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Alopecia areata (AA) is the most common autoimmune disease in man. Inheritance is polygenic with over 18 distinct gene susceptibility loci identified through genome-wide association studies.¹ AA is episodic. Circular bald patches occur suddenly over the scalp, beard, eyebrows, eyelashes, trunk or limbs and may enlarge, multiply or spontaneously remit. AA is a chronic disease and affected individuals can anticipate multiple relapses throughout their lifetime. The morbidity is principally psychological and the paper in this month's edition of the *BJD* by Rencz *et al.* addresses the impact of AA on health-related quality of life (HRQoL).²

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The onset of AA is frightening. The alopecia is disfiguring. Affected individuals go to great lengths to conceal their hair loss. Patients with extensive hair loss that cannot be concealed require great courage to engage in normal activities of life. Many affected individuals are unable to participate socially, at school or work with visible hair loss. School avoidance is common. Social withdrawal is common. Suicide is reported but fortunately is uncommon.³

For some patients, coming to terms with their hair loss, with or without the aid of a wig is a successful outcome, while for others nothing short of complete hair regrowth is acceptable. Validated tools to specifically measure the profound impact of AA on QoL are needed in order to identify the most affected psychological dimensions and factors that are associated with improvements in QoL.²

Despite extensive speculation, nobody knows what triggers episodes of AA. Putative associations with stress, diet, menarche, pregnancy and menopause remain unproven. The risk of developing additional patches of AA increases with disease severity. While local disease can usually be effectively managed with topical or intralesional corticosteroids, the treatment of extensive alopecia remains unsatisfactory.

Treatment of extensive disease generally requires high-dose oral corticosteroids. Oral corticosteroids induce remission in around 80% of patients; however, maintenance therapy is required in approximately half. The toxicity associated with maintenance therapy makes this unacceptable for many patients. Steroid-sparing agents such as methotrexate, azathioprine, ciclosporin, sulfasalazine, mycophenolate and cyclophosphamide have all been used, but are less reliable than oral corticosteroids. All these agents have associated toxicity and many are not suitable for children or women contemplating conception.⁴

Patients who are unresponsive or intolerant to treatment have been waiting for over 25 years for even a minor breakthrough. Biologic therapies that have already transformed the treatment of psoriasis and pemphigus, and are currently being trialled in atopic dermatitis, hidradenitis suppuritiva, urticaria and cutaneous lymphoma are eagerly awaited for AA. Case series and investigator-initiated trials have identified JAK/STAT pathway inhibitors such as tofacitinib, baccalitinib and ruxolitinib as potentially useful in treating AA.^{5,6} These agents are licensed for use in rheumatoid arthritis, myelofibrosis or lymphoma but are not currently being formally developed for AA.

Measuring the morbidity of AA is an important prerequisite to the development of biologic therapies. The paper by Rencz *et al.*² provides a systematic review of 479 studies and a meta-analysis of 21 studies that included a total of 2530 patients on the impact of AA on HRQoL.² They developed and validated a disease-specific QoL instrument. Not

unsurprisingly, they demonstrated that patients with AA experience significant impairment in HRQoL, especially in the areas of mental health and vitality. More extensive hair loss produced greater impairment, except for those who were comfortable wearing a wig. The development of secondary anxiety, social phobia or depression added to impairment of QoL. There was no reliable association between age, sex and disease duration. This is consistent with the finding that suicide is more likely among newly diagnosed young males who find it hard to conceal even small patches of alopecia.

Accurate assessment of the impact of AA on affected individuals is important as it guides therapy, encourages research and development of new treatments and reimbursement.

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