Assessment of alopecia areata

Introduction

Alopecia areata (AA) is a clinically heterogeneous, immune-mediated inflammatory disease characterised by non-scarring hair loss that affects ~2% of the population.[1]

The emotional and psychological impact on individuals with AA can lead to an increased risk of depression, anxiety, reduced self-esteem, altered self-image, social withdrawal, and the breakdown of personal relationships.[2,3]

Making a differential diagnosis – what to rule out

Patchy	Diffuse
Trichtillomania	Telogen effluvium
Tinea capitis	Androgenetic alopecia
Scarring alopecia	

Aspects of the history and examination that give guidance on prognosis

Factors assessed as part of the patient's history can indicate the likely progression of AA, including:

- Family history of AA[4] – 20% of patients[5]
- Younger age at onset (aged <12 years)[6,7]
- Concurrent atopic disease[5]

The initial assessment of AA also provides clues:

- More extensive disease at onset[6]
- Nail involvement – approx. 10–15% cases that are referred to dermatologists[6,7]
- Ophiasis subtype (band-like hair loss along the back and sides of the head)[7]

Medical photography and dermoscopy (trichoscopy)

Medical photography – document the extent and location of hair loss[8]

- Conduct regularly during follow up to note changes
- Ensure sufficient resolution of images[9]

Dermoscopy – examine with a dermatoscope to confirm the diagnosis

- Identifies common features of the condition – dystrophic "exclamation mark" hairs with fractured tips; cadaverised hairs and short vellus hairs[5,6]
- Identifies common indications of active disease – e.g., regular round black dots[5]

Sites affected – AA is not limited to just the scalp

The first site affected is usually the scalp, but all hair sites can be affected:[6]

- Eyebrows and eyelashes – may be only sites impacted – Can prove problematic with loss of physical barrier protecting eyes from particles[6]
- Beards – more apparent in patients with darker hair[5]

In some patients the nails are also affected – look for longitudinal striations, stippled pitting or less well-defined roughening[5]

Using the SALT score to define alopecia areata severity[10]

The Severity of Alopecia Tool (SALT) was developed to standardise the quantification of hair loss across the different quadrants of the head.[10] The SALT score is computed by measuring the percentage of hair loss in each of the four areas of the scalp (see Figure 1):

- Vertex (40%)[10,11]
- Right side (18%)[10,11]
- Left side (18%)[10,11]
- Posterior (24%)[10,11]

The percentage of hair loss in any of these areas = percent hair loss × percent surface area of the scalp in that area.[10]

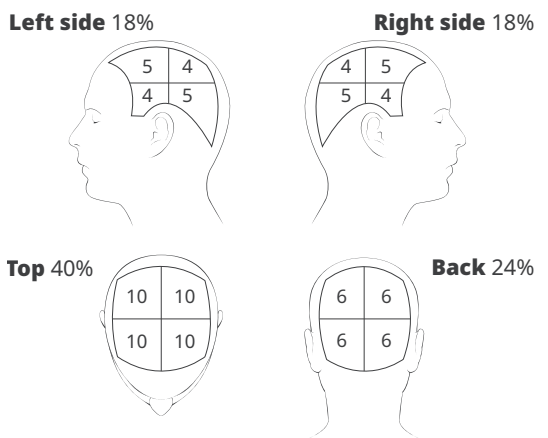

Figure 1 *Tool for estimating percentage scalp hair loss adapted from Olsen et al[12]*

For example, a SALT score of 30 would indicate 30% hair loss. The percentage of hair loss dictates the severity of the disease, categorised as: S_0 = no hair loss; S_1 = 1–24% hair loss; S_2 = 25–49% hair loss; S_3 = 50–74%; S_{4a} = 75–95% hair loss; S_{4b} = 96–99% hair loss; S_5 = 100% hair loss.[10] Percentage hair loss can be corroborated by image analysis, if desired.[10]

- Percentage change from baseline can be used to track response to treatment. The percentage change can be noted as subscript (i.e., a 25% improvement would be $SALT_{25}$)[12]

Testing for AA activity – the hair-pull test

Monitoring for AA activity can be done non-invasively using the hair-pull test:

- A small selection of hair (20–60 strands) is held securely and pulled away from the scalp. A result is considered positive if >10% of the hairs are removed[7,13]
- Identification of dystrophic anagen or telogen hairs during a positive pull test at the border of an existing patch suggests the AA is active[7,14]
- Progressive disease is indicated by a positive pull test from areas of the scalp deemed clinically non-affected[18]

When to biopsy

AA is largely a clinical diagnosis. Very occasionally, biopsy may be indicated where there is diagnostic uncertainty e.g., is it AA or early scarring alopecia?

When indicated, it is recommended to use two 4-mm punch biopsies for horizontal and vertical sectioning.[15,16] The biopsy should be taken from the edge of a lesion at a site that is normally resistant to androgenetic alopecia.[17]

More than hair loss – impacts on mental health and quality of life

Patients' quality of life (QoL) is significantly impacted by AA; however, it is an area that is often not given significant consideration.[6] Depression and anxiety are comorbid conditions that can be associated with AA.[14] Recognition by physicians of the impact of AA on QoL and mental health is essential. Physicians should consider appropriate psychiatric evaluations and the need for professional support for their patients.[18] In addition, the role of patient support organisations and charities should not be overlooked.[18]

Listening to patients is key and assessment tools can be used to gauge the impact of AA on other areas of their lives. Patient-reported outcome measures, can be used to measure the impact of symptoms on patients with AA in a reliable fashion.[19]

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