



HAIR DISORDERS

## **ALOPECIA AREATA GETTING ON YOUR NERVES? - HOW ALOPECIC PATCH LOCATION MAY POINT TO A NEURONAL ETIOLOGY OF DISEASE**

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**Introduction:** Alopecia areata (AA) results from autoimmune attack of the hair follicle. Changes in sensory innervation may play a role in AA pathogenesis. Sensory innervation of the posterior and lateral scalp originates from cervical spinal roots C2 and C3, which when damaged in animal models causes characteristic AA patches.

**Objective:** To evaluate the most common scalp locations of initial AA patches.

**Materials and Methods:** We conducted a retrospective chart review at a single academic center over the period of July 2016 to June 2018. Data regarding gender, age, race, disease duration and areas of hair loss on initial presentation were collected and analyzed.

**Results:** Our review identified 112 patients with a diagnosis of AA, alopecia totalis (AT) or alopecia universalis (AU); 73.2% of patients were diagnosed AA. Subgroup analysis by gender demonstrated that men more often present with AT/AU (36.6%) compared to women (18.3%). The majority of patients were female (53.6%), white (62.5%) with a mean age of  $38.3 \pm 17.0$  years and disease duration at time of presentation of  $7.5 \pm 11.8$  years. Most commonly AA patients (n=82) presented with initial patches on the scalp occiput (48.8%), parietal region (42.7%), vertex/crown (23.2%), frontal scalp (22.0%) and temporal region (11.0%).

**Conclusions:** It is important that clinicians diagnose AA avoiding unnecessary patient morbidity. AA patches most often present in the occipital and parietal regions of the scalp, innervated by C2 and C3. This study represents an attempt to establish a pattern and create a hypothesis. Future directions include a multi-center retrospective review of medical records to determine if these results are reproducible on a larger scale with multiple patient populations.

