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3 **Baricitnib: from rheumatoid arthritis to alopecia areata**

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10 Dear Editor,

11 Alopecia Areata (AA) is a common relapsing dermatological autoimmune disorder
12 characterised by nonscarring patches of hair loss of the scalp and/or body. It is found in
13 approximately 0.1% to 0.2% of the general population and affects individuals of all ages
14 and skin types. (1) The way the illness manifests itself varies from one sufferer to the
15 next; from hair loss in distinct, well-circumscribed circular or oval spots on the scalp or
16 body, to complete loss of hair on the entire scalp (Alopecia Totalis) and to the entire
17 body (Alopecia Universalis). (1) Alopecia may substantially alter the individual's
18 physical appearance, thus having a detrimental effect on their life, making them more
19 prone to develop psychiatric comorbidities as a consequence.

20 Currently there is no FDA authorised treatment for the underlying condition of AA, thus
21 all therapies are aimed at preventing hair loss and encouraging regeneration. Therefore,
22 there is dire need to fill the vacuum that we are presented with. In an attempt to find a
23 solution for the current predicament, two randomised, placebo-controlled phase 3
24 studies (BRAVE-AA1 and BRAVE-AA2) have shown excellent outcomes with
25 considerable hair regrowth in AA patients treated with Baricitinib, an oral Janus Kinase
26 (JAK) 1 & 2 inhibitor which is prescribed to treat Rheumatoid Arthritis (RA).
27 Baricitinib thwarts the progression of the illness by inhibiting the communication of
28 immune cells involved in damaging hair follicles.

29 SALT scores of <20 were found in 38.8% of patients treated with baricitinib 4 mg,
30 22.8% of patients treated with baricitinib 2 mg, and 6.2% of patients treated with
31 placebo in BRAVE-AA1. Patients report a significant decrease in SALT score after
32 treatment with the drug; from a starting score of 50, reaching 20 in a span of 36 weeks.
33 Similarly, the percentages for BRAVE-AA2 were 35.9% with 4 mg baricitinib, 19.4%
34 with 2 mg baricitinib, and 3.3 percent with placebo. (2) Acne, elevated creatine kinase
35 levels, and increased LDL and HDL levels have all been reported as side effects of
36 baricitinib usage. (2)

37 To substantiate this study, a report by Chen D et al. documented complete remission of
38 AA in a patient with diagnosed anti-MDA5 antibody-positive DM with AA. The patient
39 was treated with baricitinib to combat the former, however, in a surprising turn of
40 events, the drug also served to completely cure AA. (3)

41 Keeping in mind the prevalence of this disease and the lack of definite solutions, it is
42 imperative to provide an unambiguous and absolute treatment option. Thus, it is
43 essential that an FDA approved drug to treat AA be made available for patients; the drug
44 baricitinib's use in treating AA and trial is therefore an important step towards the same.
45 Hence, a much more detailed study and longer trials are crucial to evaluate baricitinib's
46 effectiveness and safety in the treatment of alopecia areata in various age groups,
47 especially in adolescent and children because of the greater occurrence of AA in young
48 population. (4)

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51 **Conflict of Interest:** None to declare.

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