Baricitinib for alopecia areata

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Madam, Alopecia areata is a disease in which an active immune response is triggered against the hair follicles, causing hair loss. The extent of this hair loss is proportional to the number of hair follicles attacked. Alopecia areata is classified into three types depending on the area of hair fall: alopecia areata, alopecia totalis, and alopecia universalis.

Alopecia areata has an approximate worldwide prevalence of 1 in 1000 people[1]. The current, well-known treatment of alopecia areata is intralesional corticosteroid injections, with 60-70% of patients reporting some form of hair growth afterward, while other treatments include topical immunotherapy, Minoxidil, and Anthralin[2]. Similar treatment methods, along with hair transplants and platelet-rich plasma (PRP) therapy, are used in Pakistan, which has been effective to some extent in controlling or stopping the progression of the condition[3].

Baracitinib, which has already been approved for rheumatoid arthritis and atopic dermatitis, is a Janus kinase (JAK) inhibitor that blocks the proteins known as JAK enzymes, which are involved in immune signalling and inflammation. It is unclear as to how the immune system of the body causes alopecia areata. A possible mechanism is by sending out signals that interrupt the events of hair growth. Baracitinib stops the communication among the immune cells responsible for causing hair loss which ultimately inhibits the signals mentioned above and lessens the response to injury, resulting in hair regrowth[4]. Thus, it can be thought of as a potential treatment for severe alopecia areata.

Recently, in June 2022, FDA approved baricitinib as the first systemic treatment for alopecia areata after two clinical trials were conducted by Brett King et al. The trial showed promising results regarding the use of barticinib as after 36 weeks of exposure, oral baricitinib outperformed placebo in terms of promoting hair growth in patients with severe alopecia areata. The proportion of participants that achieved at least 80% scalp hair coverage at 36 weeks was estimated to be 38.8% with 4-mg baricitinib, 22.8% with 2-mg baricitinib, and 6.2% with placebo in trial 1 and 35.9%, 19.4%, and 3.3%, respectively, in trial 2[5].

The trials mentioned above together with FDA's approval merit the consideration of Baracitinib as a possible treatment option for alopecia areata. Its usage does come with its own set of side effects, but those are largely manageable and outweigh the difficulties faced by patients via the invasive techniques of hair transplant and PRP, such as bleeding due to injection, infection, and formation of scar tissue.

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