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Alopecia areata - a complex autoimmune disease

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Alopecia areata (AA) is a very common disease in which hair is lost from some or all parts of the body. It is described as a condition which is a non-scarring hair loss of the scalp, and even in some conditions, the whole body. The growth cycle of the hair depends on 3 major phases: anagen, which is considered as the growth phase; catagen, which is an involution phase; and telogen, which is a resting phase. In normal conditions, the hair usually sheds off after the telogen phase, but in individuals suffering from AA, the hair starts shedding even before the anagen phase starts, hence leaving the hair follicle empty. Therefore, AA is considered a disorder of the hair growth cycle and is a follicle specific disease.   It is generally a complex autoimmune disease that results in round patches on the scalp of an individual at any age. It is characterised by inflammation, and the major factors causing this include autoimmunity, stress, genetics and environmental factors, zinc deficiency, sedentary lifestyle, family history, etc. The various types of AA are alopecia areata universalis, alopecia maligna, alopecia areata focalis, alopecia areata totalis, ophiasis inversus and alopecia areata diffusa. They are differentiated based on the pattern of hair loss and the location of hair loss, like eyebrows, eyelashes and sometimes, the whole body.   It is diagnosed based on scalp biopsy, trichoscopy and trichogram. A scalp biopsy is a very advanced process that aids in monitoring the treatment of AA. It explains the disease activity, the type of alopecia and the extent of disease progression in a particular individual. The definitive treatment of AA is not properly established, but to curb the situation, the following treatments have been implemented: corticosteroids, minoxidil, tacrolimus, mometasone, phototherapy, immunotherapy and cyclosporine.   Following a healthy lifestyle (addition of antioxidants, an anti-inflammatory diet, including turmeric, Aloe vera, probiotics, etc.) can also aid in curbing this complex problem. The treatment can be successful only if the root cause of the disease can be diagnosed, as the root causes differ from patient to patient. A lot of research is being conducted to find a better cure for this disease. Researchers are studying immune cells mechanism and the contributing environmental factors behind the disease, so as to identify an exact cure for AA.

Keywords: Alopecia, Auto-immune disease, Genetics, Treatment

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