Serum Interleukin-15 is a Marker of Alopecia Areata Severity

ABSTRACT
Background: Interleukin-15 (IL-15) is a cytokine that is involved in many inflammatory and autoimmune diseases. Although alopecia areata (AA) is an autoimmune disease, serum levels of IL-15 have not been studied well in AA patients. Aim of the Work: We aims at evaluating the serum levels of IL-15 in active AA. Subject and Methods: This case-control study included 40 AA patients and 40 apparently healthy matched controls. Written informed consents were obtained from all the participants. The scalp was examined to assess sites, number, and size of alopecia patches, and the severity of AA lesions was assessed using the Severity of Alopecia Tool score (SALT score) which determine the percentage of hair loss in the scalp. The body was carefully examined to detect any alopecia patches in any hairy area. Nail examination was carried out to detect any nail involvement. Serum IL-15 levels were measured using an ELISA kits. Results: Serum levels of IL-15 in patients were significantly higher than those in the control group ($P < 0.001$). Serum levels in alopecia totalis were significantly higher than those with one or two patches, and serum levels in patients with both scalp and body involvement were significantly elevated than the levels of patients with either scalp or body involvement. There was a statistically significant positive correlation between SALT score and serum levels of IL-15 ($P < 0.001$). Conclusion: Serum IL-15 may be a marker of AA severity.