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## Evaluation of serum high mobility group box1 level in patients with alopecia areata

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Background: Alopecia areata (AA) is the most frequent cause of inflammation-induced hair loss. It is an organ—specific autoimmune disease where T cells and cytokines play an important role in the pathogenesis. High mobility group box1 (HMGB1) is a conserved protein located in all mammalian nuclei at high concentrations. It can be released extracellularly and acts as a proinflammatory cytokine in both acute and chronic inflammatory conditions and serves as a significant target antigen in many autoimmune disorders. However, its role in alopecia areata is under investigation.

**Purpose:** To evaluate serum HMGB1in patients with AA in comparison to age and sex matched controls. Also, correlate its level with disease severity, activity and duration.

**Methods:** The present study included 50 AA patients and 30 age and sex matched healthy controls. Serum HMGB1 was assessed in all subjects using enzyme linked immunosorbent assay. Correlation between s. HMGB1 and severity, activity and disease duration of AA were also done.

**Results:** Mean serum HMGB1 was statistically highly elevated in patients than in healthy controls. In addition, HMGB1 was positively correlated with disease activity and inversely correlated with disease duration.

**Conclusion:** HMGB1 might play a role in pathogenesis of AA. Also, s. HMGB1 may serve as a new marker for disease activity. Moreover, this study may offer a new potential therapeutic target.

## **Biography**

Mohamed E. Algalaly is a major dermatologist at the Department Of Dermatology in the Armed Forces Medical Complex Kobry El koba, Egypt. He has completed his MSc from Ain Shams University, Egypt. He is member of the Egyptian Military Medical Academy. He is working at the German Armed Forces Hospital, Berlin, as a member of an international cooperation training program.

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