Title: A case control study on serum levels of Vitamin D and C-Reactive Protein in Chronic Spontaneous Urticaria

Introduction & Objectives: Chronic spontaneous urticaria (CSU) is a complex disease with multifactorial etiopathogenesis associated with autoimmune and inflammatory phenomena. To assess the serum levels of Vitamin D and C-Reactive Protein (C-RP) in patients with Chronic Urticaria and to compare them with age and sex matched controls. Also, to determine the occurrence of Chronic autoimmune urticaria among cases by using Autologous serum skin test (ASST).

Materials and Methods: A hospital based case control study with 50 patients (25 with Chronic Urticaria and 25 healthy subjects). Detailed history, clinical examination and baseline investigations was done. Blood for serum Vitamin D and C-RP levels were estimated. ASST was performed and anti-thyroid microsomal antibody (AMA) and anti-thyroglobulin antibody (ATG) levels were measured among the cases.

Results: Mean C-RP levels were higher in cases (4.89±9.57) than in controls (1.74±3.75). Mean Vitamin D levels were not different between those with and without chronic urticaria. Mean Vitamin D levels in cases was 16.04 ±7.48 & in controls was 15.74±9.08. Fourteen patients had positive ASST (56%) and eight patients (32%) with positive ASST showed raised AMA and ATG levels respectively and was statistically significant (p<0.01). The mean duration of the disease was more in ASST positive patients (4.53±5.11 SD months) than in ASST negative patients (2.90±4.24 SD months).

Conclusion: As there is low vitamin D in cases and controls, further larger clinical trials on vitamin D deficiency and Chronic urticaria are needed. The study also suggests that a positive ASST is associated with prolonged disease and ASST being a useful screening test for autoimmune urticaria helps in the management with earlier use of immunosuppressive drugs in those poorly responsive to routine therapy.

Conflict of Interest: None