



ATOPIC ECZEMA/DERMATITIS

TARC AS A BIOMARKER FOR ATOPIC DERMATITIS

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Introduction: Studies have shown that serum thymus and activation-regulated chemokine (TARC) is a reliable biomarker for the diagnosis and assessment of severity of atopic dermatitis (AD).

Objectives: To study the efficacy of serum TARC as a diagnostic marker of AD and its association with the severity of disease in the pediatric age group (0-16years) in Indian patients.

Methods: A case-control study was conducted in a tertiary-hospital in India from December-2016 to June-2018. Children with AD and controls with diseases mimicking AD (psoriasis, scabies, contact dermatitis, seborrheic dermatitis, impetigo) were recruited. The British Working Party criteria were used to diagnose AD. TARC was measured using Abcam's Human ELISA kit. Severity and quality of life (QOL) were assessed by SCORAD index and Infants' Dermatitis Quality of Life index (IDQOL) or Children's Dermatology Life Quality Index (CDLQI). Receiver-operating-characteristic curve was plotted for optimal cut-off value for TARC and correlation was determined using Pearson-correlation-coefficient.

Results: 103 (65-males,38-females) cases and 70 (38-males,32-females) controls were recruited with mean age (years) of 6.06 and 6.52, respectively. AD manifested by 1 year of age in 57.3% and by 5 years in 89.3% of children, the face being the most common site affected (83,80.6%). Acute eczema was present in 70/103 (68%) with or without lichenification (56,54.3%). The median TARC was 519pg/mL (range 14-2503pg/mL) in cases and 319pg/mL (range 46-2500pg/mL) in controls (p-value 0.004). Cut-off of 365pg/mL was obtained in AD (children>2years) (sensitivity-57.7%, specificity-72.3%, positive-predictive-value-77.6%, negative-predictive-value-50.8%). The mean SCORAD index was 37.21+ 22.0. This correlated with TARC in children >2 years (p-values<0.001). TARC correlated significantly with QOL indices in children >2 years (IDQOL-r=0.823, p-value=0.003 and CLDQI-r=0.380, p-value=0.001).





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Conclusion: Results of our study suggest that TARC is a useful biomarker for assessment of severity of AD in Indian patients in view of its significant association with SCORAD index and QOL indices.



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