CORRELATION BETWEEN THYROID HORMONES, CYTOKINE PROFILE, AND RENAL FUNCTION IN PATIENTS WITH GLOMERULONEPHRITIS

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Understanding immunoendocrine mechanisms in glomerulonephritis is essential for improving prognostic assessment and identifying systemic factors influencing disease progression.

ABSTRACT

To evaluate correlation relationships between thyroid hormone levels, cytokine parameters, and indicators of renal function in different clinical variants of glomerulonephritis.

Relevance: Understanding immunoendocrine mechanisms in glomerulonephritis is essential for improving prognostic assessment and identifying systemic factors influencing disease progression.

Objective: To evaluate correlation relationships between thyroid hormone levels, cytokine parameters, and indicators of renal function in different clinical variants of glomerulonephritis.

Materials and Methods: A cohort of 103 patients with glomerulonephritis aged 18–60 years was examined. Thyroid hormones (TSH, free T4, free T3), anti-TPO antibodies, and cytokines were assessed using ELISA. Correlation analysis was applied to determine relationships between hormonal, immunological, and renal parameters ($p<0.05$).

Results: Free T4 and free T3 demonstrated positive correlations with urine specific gravity, diuresis, erythrocyte count, CD25+ lymphocytes, and IFN-γ, and negative correlations with IL-1β, IL-8, ESR, serum creatinine, urea, and proteinuria ($p<0.05$). In contrast, TSH and anti-TPO antibodies showed negative correlations with glomerular filtration rate, tubular reabsorption, serum albumin, and urine concentration ability, indicating their adverse impact on renal function.

Conclusions: The identified correlations confirm the pathogenetic significance of thyroid hormones and cytokines in glomerulonephritis and support the role of immunoendocrine imbalance in renal impairment.