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The comparison of C1q – anti-C1q axis in lupus nephritis and primary glomerulonephritides

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We looked for the occurrence of antibodies against C1q (anti-C1q Abs) in sera of patients with lupus nephritis (LN) and primary glomerulonephritides (PGN) and tried to relate their levels with C1q transcription in blood leukocytes (BL) and kidneys (K), as well as clinical manifestation of these diseases. The study comprised 63 patients with LN, 139 with PGN and 86 controls(C). Anti-C1q and anti-dsDNA Abs, C1q, C3 and C4 in sera were determined by enzyme immunoassays. DNA and total RNA were isolated from BL and K to search for a specific mutation in the C1qA gene and to assess the expression of C1q mRNA in BL and K, respectively. A significantly higher detection rate and levels of Anti-C1q Abs were observed in LN compared to PGN and C. In LN, high levels of anti-C1q Abs were associated with the occurrence of nephrotic syndrome, and particularly with hematuria. C1q mRNA expression in BL and Kof patients with GN was significantly higherthan in C (with no differences between PGN and LN).In contrast, the mean serum levels of C1q were similar in all groups examined. No mutationin C1qA gene was found in all subjects analyzed. The results of the multiple logistic regression analysis showed that the occurrence of anti-C1q Abs along with low serum concentrations of C3 signified the LN activity. Increased expression of C1q mRNA in BL associated with unchanged serum concentrations of C1qcould indicate an increased consumption of this complement component in the course of GN.

Biography

Zofia I. Niemir is a full Professor at the University of Medical Sciences in Poznan, Poland. She is the Head of Laboratory for Molecular Nephrology. In years 1992-1996, she was a postdoc fellow (1 year) and afterwards a scientific assistant (3 years) at the Department of Pathology, University of Heidelberg in Germany. After coming back to Poland, she completed her professor thesis (1999) and since this time was a supervisor of six completed doctoral dissertations (four of them received a special Rector award). She has 52 PubMed publications with around 500 citations and index H 10.

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