

PAEDIATRIC NEPHROLOGY

SP728 INFLUENCE OF TNF-ALPHA GENE POLYMORPHISM ON THE COURSE OF NEPHROTIC SYNDROME

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Introduction and Aims: Some studies have documented an increase of the serum and urinary TNF α levels in nephrotic syndrome (NS). Aim of study: the TNF α gene polymorphism may influence the response and the course of the NS.

Methods: We studied 44 children with idiopathic steroid-sensitive NS, excluding focal glomerulosclerosis and membrane-proliferative glomerulonephritis. After 2 years

of follow-up, 20 are "non-frequent relapsers" and 24 steroid-dependent (SD) NS. Of these 24 patients, 16 were treated also with other immunosuppressive drugs over the steroids. The remission was considered "early" if the proteinuria disappears within 10 days from the start of steroid therapy (29 children; 66%), "late" if it occurs after 10 days (15 children; 34%). Patients were genotyped for the presence of the polymorphism -308G > A in the promoter TNF α gene in RT-PCR. 55 healthy subjects of the same age and sex were the control group.

Results: The NS children with "late" response are at increased risk of developing SDNS than "early" (OR 26.6; χ^2 11.539; p < 0.001) and to take other immunosuppressive drugs (χ^2 14.181; p < 0.001). The frequency of polymorphisms of TNF α gene in NS patients was 33 GG (75%), 9 GA (20%) and 2 (5%) AA, not significantly different from the controls. The different genotypes (GA and AA) do not affect the "early" or "late" response of the disease (OR 1.143, chi-square 0.034, p ns) but seem to lead to an increased risk of SD compared to GG patients, although not significant (OR 1.65; χ^2 0.122; p ns).

Conclusions: In conclusion, NS children with "early" response have a better course of the disease compared to those "late". The TNF α gene polymorphism does not affect the steroid response at the onset but could influence the NS course. This hypothesis could also induce the attempt to use anti-TNF α drugs in NS.