Cryoglobulinemia in Dialysis and Kidney Transplanted Patients Infected by Viral Hepatitis B & C

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ABSTRACT

Background and Objectives: Cryoglobulinemia is a disorder which appears in hepatitis B and C patients in long term. It usually accompanied by production of rheumatoid factor leading to consumption of complement components in serum.

As dialysis and kidney transplantation patients are highly subjected to viral hepatitis B and C infections, therefore this study has been designed to find the frequency of cryoglobulinemia, rheumatoid factor in these patients.

Materials and Methods: Two hundred and twenty nine dialysis patients and 70 kidney transplant recipients randomly selected. HBsAg and anti - hepatitis C antibodies of both sexes with different prolongation of treatment were tested by third generation of ELISA method. Their serum samples were collected and then were stored in refrigerator for a whole week in order to precipitatation of cryoglobulines. Rheumatoid factor were immediately processed by quantitative agglutination, single radial immunodiffusion and hemolysis methods.

Results: Cryoglobulinemia in dialysis and transplant patients were 36.68 % and 15.71 % respectively. Rheumatoid factor percentages in dialysis and transplant patients were 53.57 % and 20 % respectively. The age apparently did not critically affect the results, while prolongation of dialysis period significantly increased the frequency of cryoglobulinemia and rheumatoid factor incidences. Cryoglobulinemia and rheumatoid factor incidence in hepatitis B infected dialysis patients was 32% and 50%, respectively compared to 60 % and 80 % in hepatitis C infected ones.

Cryoglobulinemia and rheumatoid factor incidence dialysis in female patients were higher than male's (53.26 % against 25.54 % and 64.13 % against 45.98 %). These results did not correlate with transplant patients results.

Conclusion: Chronic hepatitis B and C may lead to exist of cryoglobulinemia and rheumatoid factor appearance and further tissue damage in dialysis and kidney transplant patients. Regular check up and proper treatment of these individuals could prolong and ease their surveillance.

Key words: Hepatitis B, Hepatitis C, Cryoglobulinemia, Rheumatoid factor, Kidney transplant