A RISK FACTOR FOR A DEVELOPMENT OF A CARDIOVASCULAR DISEASE BY HEMODIALYSIS PATIENTS WITH MICROINFLAMMATION

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ABSTRACT:
INTRODUCTION: Microinflammation on hemodialysis present in 30- 50 % of patients, and the quality of water for dialysis, dialysis membrane biocompatibility and vascular access for hemodialysis have an important role in inducing and maintaining chronic inflammation of low degree. C- reactive protein (CRP) is a reliable marker of microinflamation in cardiovascular diseases. Normal concentration in serum CRP is <5 mg /1, CRP concentration > 10 mg /l signify the microinflammation and an increased risk of development of atherosclerotic cardiovascular complications. Hemodialysis main causes of development microinflammation are: biocompatibility of dialysis membrane, the conventional solution for hemodialysis, ultrafiltration feedback, latent or clinically manifest vascular access infections. The type and throughput (flux) of dialysis memebrane. High-flux polysulfone membrane are better than Low-flux cellulose membrane. Microinflammation and CRP accelerate atherosclerosis in hemodialysis patients, and there are traditional risk factors (hypertension, hyperlipidemia, diabetes mellitus cigarette smoking, obesity), uremia (oks.LDL, free radicals ROS, hyperhomocysteinemia, infection, acidosis) and hemodialysis (biocompatibility, endotoxins, the solution for hemodialysis).
OBJECTIVE: To determine the concentration of hs-CRP (high-sensitivity high-sensitivity CRP) in hemodialysis patients in the control group to compare the concentration of hs-CRP concentration in hemodialysis patients with hs-CRP participants in the control group, comparable concentrations of hs CRP in patients with and without cardiovascular complications and to determine the incidence of cardiovascular disease on hemodialvsis compared to traditional risk factors.
MATERIAL: The group of 20 patients (15 males and 5 females), mean age 57.5 years, 15 males with an average g yersS, a group of five women's average age of 54.8 years, treated by repeated dialysis treatment in the General Hospital in Berane in 2018 and 2019 made a general overview to the exclusion of acute inflammatory diseases, control group of 10 subjects (8 males and 2 females), mean age 50.7 years, while 8 of them were male with an average age 52.75 years, while two were female with an average age 42.5 years, who belong to a healthy population. From the medical documentatio 10 patients had developed cardiovascular complications, with an average age of 66.6 years, 9 males average age of 65.67 years, one female, age 76 years with coronary heart disease and all done CRP
RESULTS: In 20 patients on hemodialysis, the mean concentration was hs-CRP-67 +-20.8 mg/ (baseline CRP <5 mg /1, while hs> 10 mg /) was significantly higher than in the reference value in the control group ranged 16.2 +-3.9mg/l, and between these two groups there was a statistically significant difference (p <0.01). For groups of 10 hemodialysis patients with cardiovascula complications, the mean concentrations of hs-CRP was 75.3 31.78 mg/, with the remaining 10 patients on dialysis without complication was conc. hs-CRP 82.45+-24.65 mg /l between these two groups there was no statistically significant difference (p> 0.05) Followed compared to traditional risk factors, 10 hemodialysis patients with cardiovascular complications of 100% have hypertension. hyperlipidemia 30%, 20 % of the patients with diabetes, 30% of the smoking and obesity have 30%.
CONCLUSION: The concentration of hs-CRP in patients on hemodialysis was significantly increased compared to the control group, which belongs to the healthy population, The concentration of hs-CRP in hemodialysis patients with cardiovascular complications was not significantly elevated compared with no complications. The incidence traditional and non-traditional risk factors can reduce the incidence of complications.