

PARTICULARITIES OF HYPERTENSIVE DISEASE IN PATIENTS ON DIALYSIS

Adrian Apostol¹, Marius Turcan¹, Viviana Ivan^{1,2}

¹ The Pius Brînzeu Emergency County Hospital Timișoara, Cardiology Department, Timișoara, Romania

2. Victor Babeș University of Medicine and Pharmacy Timișoara, Romania

Key words: terminal phase renal disease, hemodialysis, echocardiographic parameters

OBJECTIVES AND BACKGROUND

Patients with chronic kidney disease (CKD) represent a special category of risk. As part of the renal and cardiovascular continuum from risk factors to terminal phase diseases, they develop clinical syndromes with potentially severe prognosis. The aim of this study was to assess the echocardiographic parameters and different responses to treatment in dialysed patients.

MATERIALS AND METHODS

We examined a number of 1200 dialysed patients (DP) with a mean follow-up of 3 years

RESULTS

Patients on dialysis have severe cardiac risk, an intense atherogenic hyperlipidemic profile, phosphocalcic metabolic alterations and thus a higher rate of atheroma development and occurrence of degenerative valve diseases. These patients are known to have higher cardiovascular mortality and morbidity and are potential candidates for aggressive reduction of risk factors. Unlike hypertrophy, angiogenesis develops gradually, therefore, oxygen diffusion is prolonged at least 25%. Even mild renal failure is associated with a decreased coronary flow reserve in patients with non-obstructive CAD. This reserve decreases once more in hypertensive DP. Microvascular remodeling determines a reduction in the number of capillary vessels. As a result, DPs are exposed to higher risk for the occurrence of ischemic events and cardiac arrhythmia. The administration of ACE inhibitors and beta-blockers at the highest tolerated dose decreased cardiovascular morbidity and mortality and improved life quality. Moreover, small doses of these drugs proved to be effective even in patients where hemodialysis alone was enough to control blood pressure.

CONCLUSIONS

1. Efficient hemodialysis procedure represents one step in order to control high blood pressure; however, LV hypertrophy in hypertensive dialysed patients (DPs) has some particularities

2. The use of ACE inhibitors decreased hypertrophy and improved diastolic filling

3. Blood pressure and electrolyte control, anti-ischemic treatment and active surveillance of cardiac arrhythmias are of crucial importance. According to guidelines, therapeutic changes ensured an effective control of the blood pressure, improved echocardiographic parameters and dialysed blood flow.

All of the above mentioned parameters are main prognostic contributors for life quality and survival rate improvement in dialysed patients.

REFERENCES

1. Brenner. The Kidney. In: Brenner and Rector's 8th ed. Saunders, 2008.
2. Eugene Braunwald. Heart disease. In: Elsevier Saunders, 2015.