

Isolated diastolic hypotension (IDH): A new cardiovascular risk factor in chronic haemodialysis, a study of 85 cases over a period of 9 years

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Abstract

Introduction: In contrast to intradialytic systolic hypotension, which is the most common complication in haemodialysis, the isolated decrease in diastolic pressure in haemodialysis is rarely studied; it is not symptomatic and can only be detected by systematic and sufficiently repeated blood pressure surveillance during dialysis sessions.

Materials & Methods: This is a prospective study conducted over a period of 9 years (January 2010-January 2019) at the Haemodialysis Unit of the Nephrology, Department of the Mohammed V Military Hospital of Rabat, recruiting 85 patients in chronic haemodialysis in collaboration with the cardiology department. Inclusion criteria were: age ≥ 18 years, seniority in haemodialysis ≥ 3 months, and a minimum follow-up of 6 months. All the patients were dialyzed 3 sessions of 4 hours per week with membranes of high permeability of polyethersulfone and a dialysate bath: at 3 mmol / L of potassium, at 1.50-1.75 mmol / L of calcium, and a bicarbonate-based buffer adapted to maintain an alkaline reserve between 22-24 mmol/ L. The sodium in the dialysate is prescribed to be adapted to the natremia (2 mmol / L difference between plasma and dialysate). The temperature of the dialysate is set to 37 ° C. 85 patients were recruited: 30 women and 55 men (sex ratio M / F = 1.8) with an average age of 56 years and a median age of 24 months. The causative nephropathy of chronic end stage renal failure was dominated by diabetes (41%). 57% of patients received antihypertensive therapy and 8.6% had cancer. Biological parameters were in the recommended intervals. At the end of the study, 18.88% of the included patients developed de novo cardiovascular complications. These are 16 patients, 15 of whom had IDH at the end of the study. These are 10 men and 6 women with an average age of 66.7 years \pm 9.56 with a mean dialysis seniority of 55.1 \pm 21.7 months. Complications were represented by cardiac arrhythmias (7 cases), followed by sudden death (3 cases), acute coronary syndrome (2 cases), lower extremity arterial disease (4 cases). Statistical analysis shows that the presence of IDH in inclusion is a risk factor for developing new cardiovascular events at the end of the study ($p = 0.004$).

Conclusion: IDH in haemodialysis is a frequent complication, silent and unexplored. In the study, IDH was associated with an added risk of de novo cardiovascular events.

Biography

Jaouad Nguadi is a Cardiologist at Avicenna, UHC-Rabat. He is the member of the Moroccan Association of cardiology. He is the member of the Association of Internal Doctors of Rabat.



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