

BONE METABOLISM DISORDERS AND CARDIOVASCULAR MORTALITY BETWEEN 2004 AND 2014

Najla Dammak, Khawla Kammoun, Hanene Chaker, Salma Toumi, Dorra Zalila, Yosr Chaabouni, Faical Jarraya, Hichem Mahfoudh, Mahmoud Kharrat, Soumaya Yaich, Mohamed Ben Hmida, Jamil Hachicha

Nephrology department, Hedi Chaker University Hospital and Renal pathology UR 12ES14 Faculty of Medicine, Sfax, Tunisia

Introduction and objectives:

Mortality in patients with chronic renal disease and dialysis is high compared to the general population. Renal osteodystrophy is one of the factors of increasing mortality in the dialysis. The objective of our work is to evaluate the long-term mortality factors in hemodialysis patients.

Methods:

Our study is carried out in January 2004. The patients included are the hemodialysis patients for at least one year at the different centers of hemodialysis of our city. Clinical biological data were collected from each patient's dialysis records. We determined survival at 10 years (January 2014). Surviving patients were compared to deceased patients.

Results:

We collected 444 patients with a mean age of 53 ± 16 years and a sex ratio of 1.32. The average duration of dialysis was 6.7 ± 6.3 years. Initial nephropathy was undefined in 33.3%. A history of hypertension and diabetes were observed in 54.3% and 10.8%, respectively. 377 patients (85%) died at the age of 10 years. Comparison of DCD versus survivors showed that age, diabetes, albumin less than 40 g / l and parathyroid hormone (PTH) levels greater than 500 ng / l were predictive mortality factors with p values of 0.000; 0.007; 0.015 and 0.043).

Table N°1: data of general population , surviving and deceased patients:

	General population	Surviving patients	deceased patients	P
N	444	67 (16%)	377 (84%)	
Mean age	53±16 ans	46,3 ans	54,8ans	0,000
Sex ratio	1,32	1,2	1,3	0,387
Diabetes	10,8%	2,7%	12%	0,007
HBP	54,3%	48%	55%	0,145
Cardiopathy	56%	42%	59%	0,212
Albuminemia (g/l)	39±5	39±5	39±5	0,327
Hypoalbuminemia <40g/l	62%	62%	63%	0,015
PRU medium	69%	69%	69%	0,909
Hb medium (g/dl)	8±1	8,5±1	8,5±1	0,251
Ca ⁺⁺ (mmol/l)	2,2±0,25	2,26±0,2	2,29±0,2	0,357
Ph(mmol/l)	1,6±0,5	1,7±0,5	1,6±0,5	0,401
PTH (UI)	355±382	400±320	364±393	0,274
PTH>500UI	23%	21,6%	31,5%	0,043

Discussion:

Hemodialysis is associated with complications thus increasing mortality. Renal osteodystrophy is one of the most common complications. This complication heightened the prognosis of the dialysis. Risk factors for mortality in hemodialysis include age, diabetes, hypo-albuminemia and hyperparathyroidism as shown in our study. Hence the interest of taking care of the phosphocalcic abnormalities of the dialysis and the other comorbidities with a regular monitoring of these parameters.

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Conclusion:

Hemodialysis is a supportive treatment of the ESRF which has largely evolved in the direction of improvement. The diagnosis and treatment of phosphocalcic disorders improves the long-term survival of dialysis patients.

