

# DOES PULSE PRESSURE CORRELATE WITH CARDIOVASCULAR CALCIFICATIONS IN PERITONEAL DIALYSIS PATIENTS?

Saimir Seferi, Merita Rroji, Erjola Likaj, Nereida Spahia,  
Myftar Barbullushi, Nestor Thereska  
University Hospital Center "Mother Teresa",  
Nephrology- Dialysis- Transplantation, Tirana, ALBANIA.

**INTRODUCTION AND AIMS:** Cardiovascular calcifications are an important risk factor for cardiovascular events in patients on dialysis. The use of simple and inexpensive methods to evaluate cardiovascular calcifications is preferred. We have previously studied and found a strong association between pulse pressure and cardiovascular calcifications in hemodialysis patients. The aim of this study was to evaluate the relationship of pulse pressure parameter with aortic and mitral valve calcification, and abdominal aortic calcification in peritoneal dialysis (PD) patients.

**METHODS:** We performed a cross-sectional study in 41 stable patients treated with PD for more than 3 months. Patients were  $55.5 \pm 14.5$  years of age, 52.4 % males, 24.4 % diabetics and the mean dialysis vintage was  $28.7 \pm 20.0$  months. Demographic and biochemical data were examined. Blood pressure was measured with the patient in the seated position using a mercury sphygmomanometer. The mean of three consecutive readings, taken 3 min apart, was recorded. Plain X-ray images of lateral lumbar spine from all subjects with abdomen empty from dialysis fluid were studied for calculation of semiquantitative vascular calcification scores as described by Kauppila. The severity of the anterior and posterior aortic wall calcification were graded individually on a 0-3 scale for each lumbar segment and the results were summarized to develop a score (range 0-24). Echocardiograms were examined for absence or presence of calcifications of the mitral and aortic valve.

**RESULTS:** Mean pulse pressure of study population was  $54.51 \pm 14.76$  mmHg. Twenty patients (49.8 %) were identified with aortic abdominal calcification, and the mean Kauppila score was  $3.41 \pm 3.79$ . Nineteen patients (46.3 %) had at least one valve calcified, while eight patients (19.5 %) had both valves calcified. Differently from our results in hemodialysis patients, we did not find any association between pulse pressure and cardiovascular calcifications in PD patients. In univariate analysis every 1 mmHg increase of pulse pressure was not associated with significant increased risk for cardiovascular calcifications OR 1.01 (0.99-1.03),  $p=0.182$ . Also, there was no association in multivariate analysis, where every increase of 1 mm Hg in pulse pressure was not associated with significant increased risk for cardiovascular calcifications OR 1.02 (0.99-1.05),  $p=0.136$ .

**CONCLUSIONS:** In our study pulse pressure does not correlates with cardiovascular calcifications in peritoneal dialysis patients, despite theoretical support of this hypothesis and our positive results in hemodialysis patients.

