

## INTRODUCTION

Arterial calcification is an integral part of the active atherosclerosis and has been reported to be an independent risk factor for cardiovascular disease. Intra Cranial Arterial Calcification (ICAC) in hemodialysis (HD) is highly prevalent (about 90%), and its severity has been previously reported to be correlated with age, hemodialysis vintage and mineral bone disease.

## OBJECTIVES

To assess the correlation between intra dialytic blood pressure and ICAC in hemodialysis patients compared to control group without kidney disease.

## CONCLUSIONS

ICAC is highly prevalent among dialysis patients, probably a result of a complex and active processes involving inflammation and structural changes in blood vessels. We found that there is increased mortality rate as the calcification score increases.

## METHODS

A blinded neuroradiologist graded ICAC of all HD patients who underwent brain non-contrast computerized tomography (CT) from 2015 to 2017 in our institution. Age- and sex-matched patients with normal kidney function who underwent brain CT during the same period and technique served as the control group.

## RESULTS

A total of 280 patients were included in the cohort, 140 were chronic HD patients with mean ICAC score of  $2.3 \pm 0.2$  versus  $1.4 \pm 0.2$  in the control group ( $p < 0.01$ ). HD patients had decreased diastolic blood pressure and decreased mean arterial pressure as the ICAC score increased, whereas control group had increased pulse pressure. One year mortality predictor demonstrated increased odds ratio for mortality as the ICAC score increased.

Figure 1: ICACs score in study population

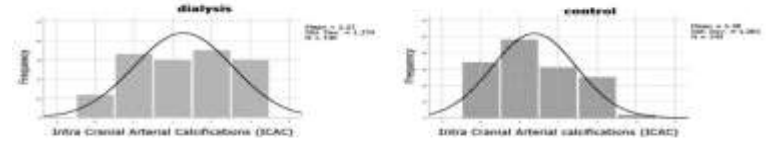


Figure 2: ICACs score distribution according to age

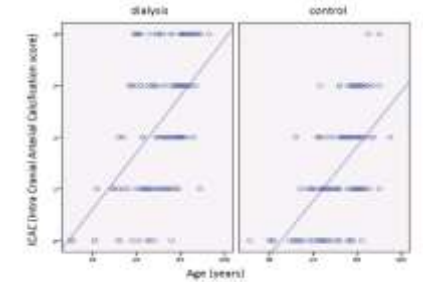


Figure 3: Kaplan-Meier survival curve according to ICAC in hemodialysis

