

# KSN 2016 Abstract Submission

## *Dialysis*

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### EPICARDIAL ADIPOSE TISSUE THICKNESS AS A PREDICTOR OF CORONARY ARTEROSCLEROSIS IN HEMODIALYSIS PATIENTS

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**Background:** Excessive perivascular adipose tissue (PAT) may influence on inflammation of vessel so that stimulate atherosclerotic plaque formation of adjacent arteries. Epicardial adipose tissue (EAT) is the adipose tissue around the heart reaching from the myocardium to the pericardium and has no anatomical connection with coronary PAT. There have been several studies that increased EAT is independently associated with coronary heart disease and major adverse cardiovascular events similar to coronary PAT in general population. However, there are almost no studies about EAT on cardiovascular disease (CVD) in hemodialysis patients.

**Methods:** Echocardiography was studied for EAT measurement in 27 hemodialysis patients. EAT was measured as highest adipose tissue thickness on the free wall of the right ventricle in parasternal long and short axis view. We investigated retrospectively the history and risk factors of CVD.

**Results:** The mean age of 27 patients was  $62.3 \pm 8.88$  years old and male were 74.1%. The causes of renal disease were diabetes (63.2%), hypertension (25.9%), polycystic kidney disease (7.4%) and unknown (3.7%). The mean EAT thickness was  $4.35 \pm 2.76$  mm. CVD occurred in 17 patients (63.0%). In univariate analysis, the association between EAT thickness and CVD is significant ( $p = 0.028$ ; 95% confidence interval (CI), 0.284-4.483). With multivariate analysis, EAT thickness has association to CVD independently in compare to age, sex, cause of renal failure and smoking ( $p = 0.42$ ; 95% CI, 0.322-0.979)

**Conclusion:** In hemodialysis patients, it is important to predict CVD. EAT thickness could be useful as a marker which suspect CVD in patient without definite finding of CVD in echocardiography. With prospective study on large population, the predictable value of EAT thickness for CVD should be confirmed.

**Keywords:** coronary atherosclerosis, epicardial adipose tissue, Hemodialysis