

## OP 7

### Cardiovascular risk factors among a group of patients with chronic kidney disease: A comparative study

Silva EH<sup>1\*</sup>, Wickramatilake CM<sup>2</sup>, Lekamwasam S<sup>3</sup>, Mudduwa LKB<sup>4</sup>, Ubayasiri RA<sup>5</sup>

<sup>1</sup>Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka, <sup>2</sup>Department of Biochemistry, Faculty of Medicine, University of Ruhuna, Sri Lanka, <sup>3</sup>Department of Medicine, Faculty of Medicine, University of Ruhuna, Sri Lanka, <sup>4</sup>Department of Pathology, Faculty of Medicine, University of Ruhuna, Sri Lanka, <sup>5</sup>Teaching hospital, Karapitiya, Sri Lanka

**Background:** Traditional risk factors as well as uremia related non-traditional risk factors are responsible for the increased Cardiovascular Disease (CVD) risk in Chronic Kidney Disease (CKD) patients.

**Objective:** To compare the selected cardiovascular risk factors among patients with end stage renal disease (ESRD) with healthy individuals.

**Method:** Fifty (men=38) consecutive patients with ESRD, awaiting kidney transplant at Teaching hospitals, Karapitiya and Kandy were recruited for a case control study. The control group included fifty (n=50) age and sex-matched healthy individuals. Data were collected using an interviewer-administered questionnaire followed by anthropometric and blood pressure measurements. Fasting Plasma Glucose (FPG), Serum Total Cholesterol (TCh), Triglyceride (TG), High Density Lipoprotein Cholesterol (HDL-Ch), Phosphorous (SPho), Corrected calcium (SCCa), Creatinine (SCr), Albumin (SAI), High-sensitivity C Reactive Protein (Hs-CRP), Interleukin-6 (IL-6), vitamin D (vit.D) concentrations and blood glycated hemoglobin (HbA<sub>1c</sub>) were estimated. Independent sample t-test and Mann Whitney U – test were used for statistical analysis.

**Results:** The mean±SD age of the patient group was 44±10 years. Mean BMI [21.9±3.7 kgm<sup>-2</sup>] of the case group was significantly lower (p=0.01) compared to the control group. Mean systolic [163.6±27.2 mmHg] (p<0.001) and diastolic blood pressure [97.4±14.5 mmHg] (p<0.001) were significantly higher among patients with CKD compared to controls. Compared to controls, mean TCh (p<0.001), LDL (p<0.001), SCCa (p<0.001), and SAI (p<0.001) levels were significantly lower among cases. HbA<sub>1c</sub> (p=0.053), SPho (p=0.001), and SCr (p<0.001) levels were significantly higher among cases compared to controls. In patient's median serum vit. D (p=0.001) level was significantly lower while serum Hs-CRP (p=0.001), and IL-6 (p=0.003) levels were significantly higher, compared to controls.

**Conclusion:** A higher occurrence of traditional cardiovascular risk factors such as blood pressure, glycemic indices and evidence of high degree of chronic inflammation were seen among patients with ESRD compared to controls.