

**Abstract Submission No.: A-1226****DOES THE GLOMERULAR FILTRATION RATE ESTIMATED BY SERUM CYSTATIN C TRULY DECREASE IN GERIATRIC PATIENTS WITH DIABETES?****Thanh-Tam Tran-Thai**<sup>1</sup>, Tien Ha Kim<sup>2</sup><sup>1</sup>Department of Physiology, Can Tho University of Medicine and Pharmacy, Vietnam<sup>2</sup>Department of Physiology, Da Nang University - Faculty of Medicine and Pharmacy, Vietnam

**Objectives :** The decline of glomerular filtration rate (GFR) with aging usually begins after 30-40 years of age, and it may hasten after the age of 50-60 years. This decline is considered a consequence of organ senescence and is related to changes in renal structure. Old age was found to be a risk factor for CKD. However, some co-morbidities, such as hypertension and diabetes, can exacerbate GFR decline. Therefore, the overall number of functioning nephrons will decrease rapidly. The aim of the study was to assess the mean GFR and prevalence of chronic kidney disease (CKD) in elderly diabetic patients.

**Methods :** A case-control study investigated two geriatric groups: 47 diabetic patients (group A) and 46 non-diabetic patients (group B) at Can Tho University of Medicine and Pharmacy Hospital, Vietnam, from October 2020 to July 2023. We collected blood and urine samples to analyze the serum cystatin C concentration and the indices of renal function. GFR was estimated by CKD EPI creatinine cystatin C equation 2021 (eGFR), and chronic kidney disease was classified by KDIGO 2021.

**Results :** The average age of the diabetic geriatric group (group A) and non-diabetic geriatric group (group B) was respectively  $71 \pm 1.0$  and  $71 \pm 1.2$  years old ( $p=0.82$ ), and there were no differences in sex, age group, weight, BMI, and blood pressure between two groups. Indices of kidney function in 2 groups A and B were, respectively: serum creatinine (Scr)  $84.9 \pm 26.3$  and  $77.9 \pm 20.1 \mu\text{mol/L}$  ( $p=0.15$ ), serum cystatin C (ScysC)  $1.3 \pm 0.4$  and  $1.22 \pm 0.3 \text{mg/L}$  ( $p=0.3$ ). The mean eGFR was  $66.8 \pm 14.6$  mL/min/1.73m<sup>2</sup> in group A and  $70.4 \pm 13.8$  ( $p=0.23$ ). The prevalence of eGFR < 60 mL/min/1.73m<sup>2</sup> was 30% and 23,9% in groups A and B, respectively.

**Conclusions :** We found no difference in glomerular filtration rate in diabetic and non-diabetic geriatric patients. However, the percentage of chronic kidney diseases was higher in elderly patients with diabetes.