**Abstract Type : Oral**
**Abstract Submission No. : 1139**

## SERUM CYSTATIN – C AS A POTENTIAL PREDICTOR OF RENAL DAMAGE IN PRE-ECLAMPSIA

**Thanh-Tam Tran-Thai[1]**, Ngoc-Bich Chung-thi[2], Hoang-Bay Quach[3], Anh-Tho Pham-Kieu[1], Hai-Sam Nguyen-Phan[1], Trung-Kien Nguyen[1]
[1]Department of Physiology, Can Tho University of Medicine and Pharmacy, Vietnam
[2]Department of Department of Laboratory, Phuoc Long District Medical Center, Vietnam
[3]Department of Department of Obstetrics, Can Tho Obstetrics and Gynecology Hospital, Vietnam, Vietnam

**Objectives:** *Pre-eclampsia is a pregnancy-related disorder characterized by hypertension, proteinuria, and edema. Serum cystatin C is a novel marker for the early detection of renal damage in pre-eclampsia. Therefore, the study aimed to determine the average value of renal function indexes and some factors related to serum cystatin C levels in pre-eclamptic pregnant women.*

**Methods:** *A case-control study investigated two pregnant women groups: 50 healthy pregnant women (group A) and 50 pregnant women with pre-eclampsia (group B) at Can Tho Obstetrics and Gynecology Hospital, Vietnam, from July 2021 to July 2022. We collected blood samples and urine samples to analyze the serum cystatin C concentration and the indices of renal function.*

**Results:** *The average maternal age of healthy pregnant women and pre-eclampsia group was respectively $31.3\pm6.4$ and $33.5\pm6.4$ years old ($p>0.05$), and the gestational age of the healthy group and pre-eclampsia group was 37.0 and 37.1 weeks ($p>0.05$). Indices of kidney function in 2 groups of healthy pregnant women and pre-eclampsia pregnant women were, respectively: serum creatinine (Scr) $50.7\pm8.9$ and $54.5\pm11.4\mu mol/L$ ($p>0.05$), serum cystatin C (ScysC) $0.9\pm0.21$ and $1.4\pm0.18mg/L$ ($p<0.01$), 24-hour proteinuria $221.3\pm35.3$ and 799.5 (306-3720) mg/24 hours ($p<0.01$), urine creatinine $1253.6\pm424.9$ and $1390.8\pm480.7mg/24$ hours ($p>0.05$), 24-hour creatinine $153\pm48$ and $162.5\pm62mL/min$ ($p>0.05$). The correlation between Scr, ScysC, and 24-hour creatinine clearance in group A was $r_1=-0.52$ ($p<0.001$), $r_2=0.06$ ($p=0.695$); in group B, was $r_3=-0.45$ ($p=0.001$), $r_4=0.26$ ($p=0.064$). The correlation between Scr, ScysC, and 24h proteinuria in group A was $r_5=0.05$ ($p=0.851$), $r_6=0.26$ ($p=0.064$); in group B, was $r_7=0.24$ ($p=0.094$), $r_8=0.36$ ($p=0.01$), respectively.*

**Conclusions:** *Serum cystatin C seems to be not as accurate as serum creatinine in evaluating the glomerular filtration rate in pregnant women; however, this is a promising biomarker for the early detection of renal injury in preeclampsia***.**