



Comparison between cystatin C level and renal artery flow profile in normal pregnancy and preeclampsia

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Abstract: Preeclampsia is a multisystem disease occurred during pregnancy as indicated by endothelial dysfunction. During pregnancy, cystatin C level elevate in serum, mainly in preeclamptic pregnancy, which is associated with structural and functional alteration in kidney, which can be utilized as marker of transition from normal pregnancy to preeclampsia and its severity degree. This study aimed to observe the correlation between cystatin C level and profile of renal artery flow in normal pregnancy and preeclampsia. **Methods:** Samples were carried with consecutive sampling from normal patients at second and third trimester and pregnant patients with preeclampsia administered in *Poliklinik Kebidanan*, Dr. Zainoel Abidin Hospital, Banda Aceh, in February– May 2009. Measurement of doppler renal artery was performed with USG type Aloka 3500 Pro 3.5 MHz-5 MHz transducer. After kidney and renal artery were identified, SD ratio, RI and PI were measured. **Results:** There was significant difference in cystatin C level between normal group and preeclampsia. Cystatin level was higher in preeclampsia group compared to normal group. Renal artery flow was significant only in left PI. Cystatin and renal artery in preeclampsia showed left PI was strongly correlated. **Conclusion:** There was correlation between left PI and cystatin C in preeclampsia in which the higher cystatin C, the higher left PI.

Keywords: preeclampsia, cystatin C, renal artery.