Abstract:
Acute renal failure is relatively uncommon in preeclampsia and eclampsia. Pre-renal oliguria often leads to acute tubular necrosis which has good prognosis. But renal cortical necrosis is a rare event and has grave prognosis. This case, a 21 year old primi at 39 weeks gestation with single term pregnancy was referred with ho 1 episode of seizures. Pregnancy was terminated by cesarean section. She developed oliguria on 2nd post operative day for which she was evaluated in nephrology unit and diagnosed as acute renal cortical necrosis. She underwent continuous maintenance dialysis till her urine output became adequate and was discharged with improved renal parameters.

The patient on dialysis:
Eclampsia with bilateral renal cortical necrosis- An interesting case report.
Case report-The patient was a 21 year old female, pimi, at 39 weeks gestation. Her LMP was 2-9-09 and EDD was 9-6-10. She was booked and immunised at Thiruvallur GH. Her first and second trimester were uneventful. In her third trimester on 04-6-10; 9.30 am she had one episode of generalised tonic clonic seizures, lasting for a min with no H/O of loss of consciousness. She got admitted in Thiruvallur GH with BP 200/110 and was diagnosed as AP Eclampsia. She was given MgSo4 loading dose and antihypertensives and referred to Kilpauk Medical College Hospital. She got admitted in KMCH on 04-06-10, 12:30 pm with BP 160/100 and with no further episodes of convulsions. She gives H/o Headache, pedal edema and puffiness of face for 3 days. No H/o
epigastric distress, vomiting, blurring of vision. Her bladder and bowel habits were normal. She had no known medical risk factors. Her BP was monitored serially. The antihypertensives and Mgso4 regimen were continued... In view of eclampsia, the pregnancy was terminated by emergency LSCS 5hrs after seizure episode. A live term male baby of birth weight 2.6 kg delivered with weak cry after birth, poor APGAR score and shifted to NICU for observation. On immediate post operative period, she had no further convulsions and her BP was recorded 140/90 mmHg. She was adequately hydrated with IV fluids and antihypertensives. Mgso4 regimen was continued for 24 hrs after onset of convulsions. The urine output was adequate. She was further evaluated. Except for hemoglobin which was 8 gm%, low platelet count (78,000/cc), elevated serum LDH (702 IU) and Creatine (3.2mg%) blood reports were normal. The fundus showed macular edema. Ultrasonography (USG) showed B/L Medical Renal Disease. The next day patient was shifted to Nephrology ward in view of elevated renal parameters and decreased Urine output of 5ml/day. Her fluid intake was restricted to 500 ml of Normal Saline at 8-10 drops/min. Antihypertensive drugs and parenteral antibiotics avoiding nephrotoxic drugs was continued. 4 units of platelets was transfused. Patient was started on Hemodialysis. Ultrasound abdomen was repeated which showed Grade II Bilateral medical renal disease. Even after hemodialysis, patient’s urine output was 5 ml/min and renal parameters remained elevated. So Renal (needle) biopsy was taken. It showed features of cortical necrosis with infarction. Immunoflorescence study showed focal mesangial deposits of IgA, C3c, Ig M. Only after 23 sittings of hemodialysis, urine output has increased to 1500 ml/day on 13-07-10. She was discharged on 14-7-10 with....BP 130/80 mmHg, Urine output 1500ml/D and S.Creatinine 5.4mg%. Patient was advised maintenance dialysis twice weekly till her urine output is adequate. She was advised regular checking of renal parameters and salt, protein and fluid restriction. Patient was counselled that her prognosis will be worse if she conceives subsequently and was advised barrier contraception. The choice for Renal Transplantation was also discussed. Discussion: Pre-eclampsia due to a primary disturbance of placental vasculature is leading to increase systemic vascular resistance and bears a potential for multiorgan disturbances / failure secondary to vasoconstriction. The mainstay of management is early diagnosis, prevention of hypertension and seizures. All pregnant women should have regular assessment of their blood pressure and urinary analysis for proteinuria. Women at high risk should be referred for specialist antenatal care. Severe pre-eclampsia requires intensive management and the ultimate cure being delivery of fetus. Acute renal failure (ARF) is regarded as relatively uncommon in preeclampsia-eclampsia (PE-E) and, in any event, of moderate degree or reversible. Pre renal oliguria often leads to acute tubular necrosis and has good prognosis. Cortical necrosis is reported as rare, even in fatal cases but has grave prognosis. Little light has as yet been shed on the mechanisms responsible for ARF in PE-E. The severity of renal impairment did not appear to be related to chronological age, parity, period of pregnancy in which PE-E commenced and its duration prior to delivery, presence of frank eclamptic crises or the concomitance of earlier vascular or renal disease. Regarding Chronic Kidney disease and Preeclampsia,
in cases of mildly reduced renal function with Cr<1.4 mg %, the outcome for pregnancy and renal disease is good. In moderately impaired renal function cases, with creatinine 1.4-2.8 mg %, there will be progression of renal failure with increased fetal risk. In cases of severe renal insufficiency with Creatinine 2.8 mg %, there will be a high fetal maternal mortality /morbidity, low likelihood of successful outcome, and pregnancy is discouraged. In patients with high grade proteinuria and severe hypertension, progression of renal disease in pregnancy will be worse. Reduced fertility is common in patients on dialysis due to elevated prolactin, reduced estrogen, anemia, and anovulation.

Regarding transplantation, it restores fertility and the outcome depends on comorbidities, presence or absence of hypertension, renal function at conception, degree of proteinuria. In women with well preserved graft function, pregnancy per se does not appear to adversely affect graft function. Pregnancy is not advisable in women with poorly controlled BP, proteinuria >500 mg/day, increased incidence of UTI, graft pyelonephritis, anemia, and worsening proteinuria.

On examination, she was conscious, oriented. She had mild pallor, facial puffiness, and B/L Grade 2 pedal edema. Her pulse rate was 88/min, BP 160/100, RR 22/min. Per abdomen examination shows Uterus at term, not acting, and head unengaged. FH was good, and liquor was adequate clinically. Vaginal examination demonstrated an uneffaced cervix with os closed. Her routine urine examination showed albumin ++, sugar – Nil and plenty of RBCs. Her Hemoglobin was 8.6 gm%, Sugar 92 mg%, Urea 45 mg% and creatinine 0.9 mg%.