

## REFERENCE

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**PM.52** **DIAGNOSTIC ACCURACY OF SPOT PROTEIN CREATININE RATIO(PCR) IN COMPARISON TO 24 HOUR URINE PROTEIN**

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**Objective** To review the use of spot protein creatinine ratio as a diagnostic test for preeclampsia in comparison to 24 hour urine.

**Methods** This was a retrospective observational study on 100 pregnant women referred to the day assessment unit with new onset hypertension. A spot test for PCR and a 24 hour collection were commenced at the same time. Patients with renal disease, proven UTI and diabetes were excluded. Data was analysed using Microsoft Excel. Significant proteinuria was defined as a PCR value of 30 mg/mmol and 300 gms/24 hours or more with 24 hour urine. With 24 hour urine as a standard, having excluded the under and over collections, the co-relation between PCR and 24 hour urine protein was determined by Spearman co-relation coefficients. The sensitivity, specificity, NPV and PPV were calculated.

**Results** Of the 100 women, 7 were excluded due to proven UTI 43 patients were subsequently excluded as the 24 hour urine collections were incomplete as deemed by the urinary creatinine excretion. Among the rest of the 50 patients, The PCR values were found to correlate well with the 24 hour collection results. The test is found to have a sensitivity of 90% and a specificity of 84% with a positive likelihood ratio (LR) of 5.2 and a negative LR of 0.1.

**Conclusion** The 24 hr collection is cumbersome, time consuming and there can be errors in collection, while the spot PCR test compares very well to the 24 hour protein test, is easier to perform.

**PM.53** **CRADLE: COMMUNITY BLOOD PRESSURE MONITORING IN RURAL AFRICA: DETECTION OF UNDERLYING PRE-ECLAMPSIA**

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**Introduction** In developing countries pre-eclampsia is under-detected partly due to inadequate training in accurate blood pressure (BP) measurements and insufficient equipment. CRADLE is an international study to evaluate whether the introduction of novel, low-cost, automated BP devices into rural clinics in Tanzania, Zimbabwe and Zambia increases referrals for suspected pre-eclampsia to a central referral hospital. This will be reflected in an increased mean BP in pregnant women presenting centrally.

**Methods** Prospective longitudinal pre- and post-intervention study. BP measurements were taken from consecutive women  $\geq 20$  weeks gestation who accessed care at a referral site (N = 694). Intervention: 20 BP devices were distributed to 20 rural antenatal clinics in each country. Post-intervention data was collected the following year (N = 547).

**Results** After adjustment for confounders, there was a significant increase in our primary outcome, post-intervention mean diastolic BP, for all women, implying an increased proportion of referred hypertensive women (2.39 mmHg,  $p < 0.001$ , 95% CI 0.97–3.8) and

a reduction in proportion of women (median gestation 35 weeks) who had never previously had a BP in pregnancy, (25.1% to 16.9%, OR 0.58,  $p = 0.001$ , CI 0.42–0.79). In Zimbabwe there was an additional significant increase in the proportion of women who had sustained hypertension (12.8% to 21.3%, OR 1.09,  $p = 0.03$ , CI 1.06–3.43).

**Conclusion** Equipping low-skilled community health providers with a novel BP device is feasible and widely accepted, and increased community referrals for suspected pre-eclampsia. A cluster RCT to evaluate the effect of these monitors equipped with traffic light early warning systems, on maternal and fetal outcomes is planned.

**PM.54** **SUCCESSFUL TREATMENT OF TWO CASES OF SEVERE AORTIC STENOSIS IN PREGNANCY**

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**Introduction** Severe aortic stenosis can result in collapse and sudden death. Cardiac morbidity during pregnancy is related to the severity of the stenosis and symptoms.

**Patient A** Patient A was 41 years old with known aortic stenosis and a dilated aortic root (5 cm). At 15 weeks gestation she developed dyspnoea and chest pain. An echocardiogram was performed, which showed an aortic valve gradient of 82 mmHg with a dilated aortic root. She was transferred to a tertiary unit and balloon valvuloplasty was performed, resulting in improvement of the aortic valve gradient from 82 mmHg to 50 mmHg and in symptoms. The pregnancy progressed well and she was delivered by Caesarean Section at 38 + 3 because of the dilated aortic root.

**Patient B** Patient B was 25 years old with a known bicuspid aortic valve and previous treatment to coarctation of the aorta. An echocardiogram at 16 weeks gestation demonstrated an aortic valve gradient of 120 mmHg. She was admitted urgently. A balloon valvuloplasty was attempted but was unsuccessful. She was counselled regarding treatment options, which included doing nothing and risking sudden death, valve replacement or termination of pregnancy. The patient opted for a valve replacement with a prosthetic valve. She had labour induced and a vaginal delivery at 37 weeks.

**Conclusion** Both women had successful treatment of aortic stenosis in pregnancy, reducing their risk of cardiac morbidity and maternal mortality. Close multidisciplinary working between specialist obstetric and cardiac teams is necessary to provide the most appropriate management.

**PM.55** **DEVELOPING AND DEFINING AUDITABLE STANDARDS OF CARE FOR OBSTETRIC WOMEN ADMITTED TO ITU: COMPLETING THE AUDIT CYCLE**

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There are many reports and recommendations in maternity care with some confusion and lack of clarity. Standards are available from confidential reports in maternal deaths, Clinical Negligence Scheme for Trusts, Safer Child Birth, Maternity Critical Care Working group and local trust guideline. There are local & national concerns about recognising and managing sick mothers and need for regular audit of services.

We aimed to develop and define auditable standards of care for obstetric women requiring ITU admission at Queen Elizabeth Hospital Kings Lynn NHS Foundation Trust.