

mellitus, systemic lupus erythematosus, antiphospholipid syndrome, or prior preeclampsia. Women with a risk >1:100 at screening were prescribed 150mg aspirin until 36 weeks. Those with a low-risk screening but with a high-risk factor were offered the possibility to either be considered as low-risk and not receive aspirin or still take aspirin.

The main maternal basal characteristics as well as perinatal outcomes were collected from the clinical electronic history. PE was defined as the presence of hypertension (>140 / 90 mmHg) and proteinuria (>300 mg/24 hours or a urine protein-to-creatinine ratio >0.3 mg/mg). Preterm PE was considered as the one that required delivery before 37 weeks of gestation. For the purpose of this study, patients with a high-risk factor or positive screening were contacted by telephone and asked about their adherence to aspirin.

Descriptive analysis was performed using mean (standard deviation) and median (interquartile range) or n (%) where appropriate. The performance of the screening to detect PE was tested using logistic regression analysis, sensitivity, specificity, positive and negative predictive value, and the area under the ROC curve. Statistical analysis was computed using STATA 14.2 and significance was considered with p values <0.05 in a two-tailed distribution.

**Results:** A total of 1831 screenings were performed, of which 1330 had complete pregnancy outcomes and composed the final study population. The mean (SD) maternal age was 31.8 (6.1) years old and 48% were nulliparous. There were 52/1330 (3.9%) who had at least one major risk factor of PE: prior PE (3.1%), chronic hypertension (2.6%), antiphospholipid syndrome (0.8%), diabetes mellitus (0.5%), and systemic lupus erythematosus (0.2%).

In 126/1330 (9.5%) women a positive screening was obtained, of which 115/126 (91.3%) were treated with aspirin and 111/115 (96.5%) reported >90% adherence. Among those with at least one high-risk factor, the rate of positive screening was 27/52 (51.9%). All with a positive screening and 7/16 with a negative result were treated with prophylactic aspirin.

The PE incidence was of 4.96% and 1.73% of preterm PE. Among women with at least one high risk factor, the incidence of preterm PE was 3.85% (7.41% vs 0% in those with that screened positive vs negative, respectively).

The performance of the screening for preterm PE on the whole population vs those with a high-risk factor was as follows: sensitivity of 52.2% (95%CI 30.6% -

73.2%) vs 100% (95%CI 15% - 100%), specificity of 91.3% (95%CI 89.6% - 92.8%) vs 50% (95%CI 35.5% - 64.5%), positive predictive value of 9.5% (95%CI 5% - 16%) vs 7.4% (95%CI 0.9%-24.3%), negative predictive value of 99.1% (95%CI 98.4% - 99.5%) vs 100% (95%CI 86.3% -100%), AUC of 0.71 (95%CI 0.61 - 0.82) vs 0.75 (95%CI 0.68 - 0.82).

**Table 1.** The performance of the screening for preterm PE on the whole population vs those with a high-risk factor

|                    | General population        | High-risk factor       |
|--------------------|---------------------------|------------------------|
| <b>Sensitivity</b> | 52.2%<br>( 30.6% - 73.2%) | 100%<br>(15% - 100%)   |
| <b>Specificity</b> | 91.3%<br>(89.6% - 92.8%)  | 50%<br>(35.5% - 64.5%) |
| <b>PPV</b>         | 9.5%<br>(5% - 16%)        | 7.4%<br>(0.9%-24.3%)   |
| <b>NPV</b>         | 99.1%<br>(98.4% - 99.5%)  | 100%<br>(86.3% -100%)  |
| <b>AUC</b>         | 0.71<br>(0.61 - 0.82)     | 0.75<br>(0.68 - 0.82). |

**Conclusion:** In our setting, half of women with at least one high-risk factor have a positive first-trimester screening for preterm PE. The overall performance is similar to the general population with excellent negative predictive values in both. The rates of preeclampsia were similar in women who screened negative regardless of the presence of major risk factors. We cannot exclude a possible effect of aspirin since 44% of women with high-risk factors and a negative screening were treated with aspirin.

**Keywords:** First trimester, screening, preeclampsia

**OP-009 Antenatal corticosteroids in the late preterm: a five year retrospective comparative study**

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**Objective:** Late preterm neonates, although of comparable size and weight to term newborns, are still at higher risk for morbidities and mortality compared to term infants. However, ANC use to prevent these complications in the late preterm remains controversial. The goal of this study was to evaluate the outcomes of late preterm neonates who received primary and/or rescue courses of ANC within or beyond seven days compared to those who did not receive antenatal corticosteroids.

**Methods:** Eighty one mothers and babies were included in this study. Review of their medical records was done. Patients were grouped into four: Group 1 – those who delivered without being given ANC; Group 2 - delivered

between 34 – 36 6/7 weeks AOG and were given primary course of ANC; Group 3 - had history of preterm labor and given ANC prior to 34 weeks but delivered between 34 – 36 6/7 weeks AOG and given rescue course of ANC; and Group 4 - had history of preterm labor prior and given ANC prior to 34 weeks but delivered between 34 – 36 6/7 weeks AOG and not given rescue course.

**Results:** There was no significant difference in the mean Apgar score at the first ( $p=0.538$ ) and fifth minute ( $p=0.741$ ), prevalence of respiratory distress syndrome ( $p=0.201$ ) and intraventricular hemorrhage ( $p=0.235$ ) across the four groups. Prevalence of the need for surfactant was significantly highest in Group 4 (50.0%) and lowest in Group 3 (6.2%) ( $p=0.004$ ) while the prevalence of neonatal hypoglycemia was significantly highest in Group 4 (80.0%) and lowest in group 1 (11.1%) ( $p<0.001$ ). The benefits and adverse effects of ANC in the late preterm group should be further studied. The additional benefit of reduced need for surfactant is modest and did not affect the primary clinical endpoint of reduced risk for respiratory distress. The neonatal outcomes depending on the timing of administration of ANC (delivered within or more than seven days) did not differ significantly.

**Conclusion:** The benefits, outcomes and long term maternal and neonatal effects of ANC given in the late preterm should be further studied. Based on literature, ANC seems to be beneficial in the late preterm at 34 – 35 6/7 weeks AOG but respiratory distress at 36 weeks and early term may result from complications during the prenatal to postnatal transition period. At this age of gestation, starting 36 weeks and beyond, ANC does not seem to be beneficial anymore, given the potential risk for neonatal hypoglycemia as well. In addition, the benefit of reduced need for surfactant among those given rescue course in the late preterm seen in this study is modest and cannot yet be confirmed with the small sample size and the retrospective design of the study.

**Keywords:** Antenatal corticosteroids, rescue course, late preterm, respiratory distress syndrome

#### PP-010 A Case of monochorionic monoamniotic twins with cord entanglement and its outcome

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**Objective:** Monoamniotic twin gestations are rare occurring 1 in 12500 births making up <1% of all twin

pregnancies. The outcome of monozygotic twinning depends on when division occurs. If it occurs after 8 days of fertilization as chorion and amnion are already differentiated. The main factor associated with perinatal mortality of Monochorionic monoamniotic twins are umbilical cord entanglement, cord accidents, congenital malformations, preterm delivery, fetal loss, TTTS, congenital anomalies. We present a peculiar case of cord entanglement in monochorionic monoamniotic twins who presented to us at 34 weeks gestation with follow up had positive outcome.

**Methods:** G2P1L1 with monochorionic monoamniotic twin gestation who was under regular follow up presented to us at 34 weeks gestation in labor with scan showing Monochorionic monoamniotic twins with twin 1 in cephalic and twin 2 in breech presentation with normal interval growth scan and doppler. NST was reactive. She underwent emergency section, revealing intraoperative findings consistent with cord entanglement. Subsequent follow-up confirmed a positive perinatal outcome.

**Results:** Patient was admitted at 31 weeks for prophylactic steroid administration (4 doses dexamethasone 6mg im given 12 hours apart). Routine investigations with obstetric ultrasound done found to be within normal limits. Intraoperative findings ; lower uterine segment was well formed with clear and adequate liquor drained. Twin 1 extracted by vertex, twin 2 extracted by breech. One loop of cord was present around neck of twin 2. Hyper coiling of the cord present of about 30cm with cord entanglement with multiple true knots. Total length of the cord was about 50 cm (Figure 1). Both babies cried immediately after birth. Placenta was monochorionic monoamniotic type weighing 1 kilogram. Both babies were transferred to the Neonatal Intensive Care Unit and underwent continuous monitoring (Figure 2). They demonstrated gradual improvement, eventually being successfully weaned off respiratory support and initiated on feeding. On Day 13, they were shifted to ward (Figure 3). and were discharged on day 19.



Fig 1-2. Length of cord / Babies on Day-0 and 1000 grams