Identification of pre-term labour using PartoSure and cervical length assessment

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OBJECTIVE:

MBRRACE guidelines in 2018 stated that almost three in four babies who die in the perinatal period were born preterm.[1] Hence, identification and management of preterm labour (PTL) has health, economic and social consequences.

The objective of this study was to evaluate the effectiveness of PartoSure and cervical length measurement in identifying PTL and eventually changing institutional practice.

DESIGN:

A three month prospective study was done on patients between 24 to 36+6 weeks of gestation presenting to the antenatal triage with symptoms suggestive of PTL . The rationale behind this study design was to precisely determine the efficacy of PartoSure and Cervical Length measurement in assessing PTL.

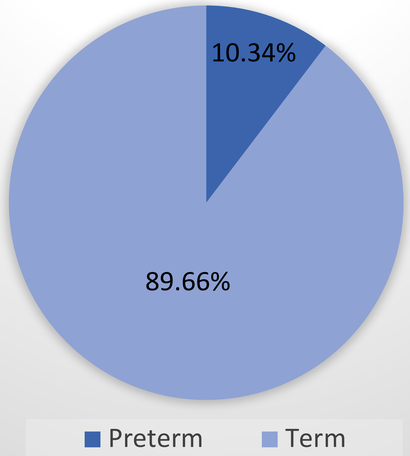
METHODS:

Over the period of three months patients between 24 to 36+6 weeks of gestation presenting to the antenatal triage with symptoms suggestive of PTL were included in our study. Clinical assessment along with speculum examination was performed in all patients. Partosure and /or cervical length assessment and further management was done according to the departmental protocol.

RESULTS:

Between April 2021 to June 2021, 58 patients were identified with threatened PTL of which 29 (48.27%) were admitted. PartoSure positivity rate was 8.62% and among the 15 who had cervical length assessment 2 (3.4%) women had a short cervix. 6 in 58 (10.34%) women delivered preterm, of which 3 (5.17%) went into PTL and received steroids. The rest were delivered due to obstetric reasons.

GESTATIONAL AGE AT DELIVERY



PARTOSURE

Parameter	Percentage
Sensitivity	25 %
Specificity	92 %
Positive predictive value	20%
Negative predictive value	96.2 %

Partosure was associated with high negative predictive value for PTL

CERVICAL LENGTH

Parameter	Percentage
Sensitivity	66 %
Specificity	100 %
Positive predictive value	100%
Negative predictive value	98.21%

Cervical length is better than partosure to predict PTL.

CONCLUSION:

PartoSure and cervical length measurement have very high negative predictive value for preterm labour and can guide antenatal corticosteroid usage and hospital admission. Multi-centric randomised trials and cost benefit analysis are required to encourage use of PartoSure and cervical length measurement in obstetric units.

References: 1. Knight M, Bunch K, Tuffnell D, Jayakody H, Shakespeare J, Kotnis R, Kenyon S, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. Saving Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2014-16. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2018