CLINICAL OUTCOMES OF UNIVERSAL CERVICAL LENGTH ASSESSMENT ON LOW-RISK ASYMPTOMATIC PRETERM PREGNANCIES: A SYSTEMATIC REVIEW AND META-ANALYSIS

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BACKGROUND

Preterm birth is a major cause of neonatal morbidity and mortality. A short cervix increases the risk of preterm delivery. Implementing universal transvaginal cervical length assessment is recommended to identify at-risk women, but there is debate about its use in low-risk asymptomatic patients. This study aims to determine the impact of universal transvaginal cervical length (UTVCL) assessment on clinical outcomes in these patients.

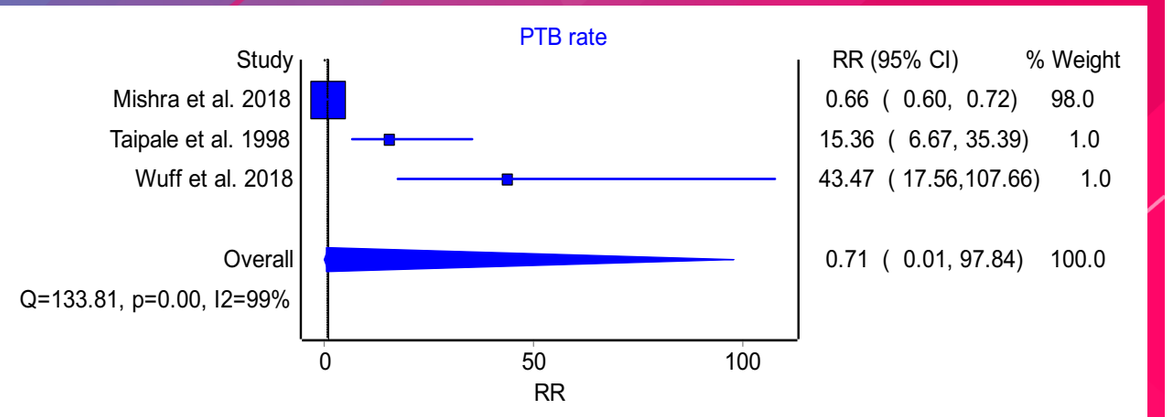
METHODOLOGY

Randomized-controlled trials (RCTs) and cohort studies on UTVCL versus non-use of UTVCL were retrieved. Risk ratio (RR) was used to assess the effects of the UTVCL screening on the incidence of PTB. Interstudy variations and heterogeneities were estimated with P <0.05 indicating statistically significant heterogeneity. Meta-analytic sequential analysis (SA) was employed for the required information size (RIS) and obtain the O'Brien-Fleming monitoring and futility boundaries, and Z-curve in determining the superiority, inferiority or equivalence of UTVCL over the control groups. Risk of bias were assessed using Cochrane Risk of bias tools. True presence of publication bias was evaluated using LFK index.

Keyword/s: universal cervical length assessment, preterm birth, low-risk asymptomatic pregnancy,

RESULTS

Three studies were examined and the utilization of UTVCL assessments was found to lower the risk of PTB. Reduction risk was 0.71, with a 95% CI ranging from 0.01 to 97.4. However, despite the effect estimate being close to null based on the CI, the primary analysis was deemed robust following sensitivity analysis using the RE model.



CONCLUSION

Universal cervical length screening during the second trimester of pregnancy in women with a short cervix and no history of preterm birth can potentially reduce the occurrence of preterm birth. However, further larger-scale clinical trials are needed to confirm this and improve pregnancy care outcomes.