

Correlation between cervical length, body mass index and spontaneous preterm birth

Nurul Iftida Basri^{1,2}, Rima Dasrilyah^{1,2}, Amilia Afzan Mohd Jamil^{1,2}, Charmaine Sook Yee Leong²

¹Department of Obstetrics & Gynaecology, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, Serdang, Selangor, Malaysia, ²Department of Obstetrics & Gynaecology, Hospital Sultan Abdul Aziz Shah, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

ABSTRACT

Introduction: Previous studies suggested a link between body mass index (BMI) with cervical length and risk of spontaneous preterm birth (sPTB). Due to the lack of evidence in the aetiology of sPTB, cervical length has been utilized as a means to predict risk of sPTB. Cervical length of <2.5 cm has been used as the cut-off point for any intervention to take place. However, studies showed that this may vary in different population. This study aimed to determine the risk of sPTB with cervical length measurement and its correlation with BMI. **Materials and Methods:** Female patients with singleton pregnancy between 18-24 weeks were recruited for cervical length measurement via transvaginal ultrasound. Those with major fetal anomaly and history of sPTB were excluded. Sociodemographic data including the parity, age, BMI and medical background were obtained. They were followed up till delivery. **Results:** Total of 153 women were included. Women in all BMI category (underweight, normal, overweight and obese) has similar mean cervical length of between 30.3 to 32.6 mm. Out of 153 women, there were nine cases of sPTB in which all were late preterm 4 women (44%) belongs to overweight/obese group while the other 5 women (56%) belongs to normal BMI group. **Conclusion:** This study found no correlation between cervical length, BMI and sPTB. A larger sample size is needed to confirm the correlation in our population to get a better AUC from the ROC curve in which a higher AUC means a better prediction of determining the outcome of preterm or term birth.