



Feasibility of the transverse method to access the uterine artery PI measurement for screening of pre-eclampsia

Pedroso MA, Machado LG, Aguiar LMS, Derzoti JA, Tavares RP, Menicucci FM, Silva CHM
Mater Dei Hospital - Fetal Medicine Unit, Belo Horizonte, Brazil

Objective

Validate the transverse technique for measurement of the uterine artery Doppler in the first trimester of pregnancy as an effective method to measure the impedance of these vessels as a screening method for pre-eclampsia (PE).

Methods

This is a prospective study that was carried out with all pregnant women who presented to the first trimester screening program at Mater Dei Hospital, from August 2017 to January 2018. As a routine scan, all women had a bilateral longitudinal insonation of the uterine artery in order to get risk assessment for PE as per the Fetal Medicine Foundation combined with the maternal characteristics and measurement of the mean arterial blood pressure. After that, we got also the bilateral measurements from the uterine artery in the transverse method.

Results

There were 349 patients evaluated in this period of time, and the uterine artery IP value was 1.633 (+ 0.54). The uterine artery insonation technique proved to be an easy method for the evaluation of these vessels, which can be used similarly to longitudinal technique, with the same applications and similar results. The great advantage of this new technique is that it is faster and of easier identification of the uterine arteries, and could be useful for to minimize the time needed during the scan.

Conclusion

The data obtained shows that the transverse technique for measuring the uterine artery PI, with the objective of making universal PE screening is feasible and easy to be obtained, and can be an option for a faster scan to screen for pre-eclampsia in the first trimester.