

The evolution of fetal presentation during pregnancy. External breech to cephalic version is more likely to be beneficial if performed at 36 weeks

Ferreira J, Borowski D, Czuba B, Cnota J, Wloch A, Sadowski K, Wielgos M, Wegrzyn P
First Department of Obstetrics and Gynecology, Medical University of Warsaw, Warsaw, Poland

Objective

To study the changes in prevalence of the different types of fetal presentation along the pregnancy and to verify if there is a gestational age after which the chances of spontaneous version from breech to cephalic presentation are so low as to favour external version.

Methods

We did a retrospective cross sectional study using ultrasound exam records of fetal position of singletons from 18 to 39 weeks. We selected from our database, for the analysis, only patients who had just one record. We analyzed the frequency of each of 4 types of presentation (cephalic, breech, transverse and variable) at each gestational week. Using the prevalence of cephalic presentation at 39 weeks as the baseline comparison, we identified the gestational age after which there would be no further changes in that prevalence.

Results

From the data collected we selected 18, 019 exams for the analysis. With the progression of the pregnancy there was an increase in the prevalence of the cephalic presentation at the cost of the reduction of the other types of presentation. This progression can be modelled mathematically by a polynomial cubic function. Roughly there is an almost constant increase in its frequency between 22 and 36 weeks with a plateau before and after. For example, at 18, 22, 30, 36 and 39 weeks, the prevalence of the cephalic presentation was, respectively, 45, 47, 83, 94 and 96%.

Conclusion

Spontaneous versions from breech to cephalic are unlikely to occur after 36 weeks. Since prior work has suggested an advantage of earlier interventions, external cephalic versions are more likely to be beneficial if performed at 36 weeks but not before. This project was supported by The National Science Centre (Grant No. 1233/B/P01/2011/40).