

Editorial

The Use of 3D/4D Ultrasound in Clinical Practice

At the 4th International Fetal Neurology Conference in Bucharest in March 2015, Asim asked me to plan a special issue on clinical practice in obstetric and gynecologic ultrasound. I considered that the use of three-dimensional/four-dimensional (3D/4D) ultrasound in obstetrical and gynecological clinical practice is the most interesting, attractive and current topic to satisfy not only his request but also readers of the Yellow Journal. The latest advances in 3D/4D ultrasound, such as the HDlive silhouette mode, 3D/4D color/power Doppler, HDliveFlow, Kurjak's antenatal neurodevelopmental test (KANET), fetal observable movement system (FOMS), and 3D volume measurement with VOCAL, will facilitate more precise assessments of fetal growth and development, fetal neurobehavior, fetal brain function, fetal circulation, fetal abnormalities, fetal organ and placental volume measurements and gynecologic disorders. For example, 3D/4D ultrasound has the potential to supplement conventional two-dimensional (2D) ultrasound in the diagnosis of fetal anomalies, and it can assist in the prenatal understanding of the diagnostic challenges regarding complicated anomalies. This technique would be beneficial for the detailed evaluation of gynecologic disorders. Three-dimensional ultrasound also facilitates accurate and reliable fetal organ and placental volume measurements. New fetal neurobehavioral assessment tests, such as KANET and FOMS, may reflect the normal and abnormal neurological development of the fetus. Four-dimensional ultrasound may become an important modality in future research on fetal neurobehavioral development, and assist in evaluation of the fetal brain function. This special issue compiles the efforts of nine well-established international experts in obstetric and gynecologic ultrasound by reviewing the latest advances in this field, with a strong emphasis on the usefulness of 3D/4D ultrasound in clinical practice, its advantages, disadvantages and limitations, and future research on obstetrics and gynecology. Therefore, I consider each review article to be important enough to be published in the form of a special issue of the Yellow Journal. This will attract considerable interest, and provide new information for readers of the Yellow Journal.



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