

Suspect Ventriculomegaly? Try Fetal MRI

BY DOUG BRUNK

SAN DIEGO — Fetal magnetic resonance imaging can be considered when isolated lateral ventriculomegaly is suspected on ultrasound, results from a single-center study demonstrated.

At the annual meeting of the American Institute of Ultrasound in Medicine, Dr. Fadi Mirza presented findings from a retrospective study of sonographically suspected cases of isolated ventriculomegaly seen at Columbia University Medical Center, New York, between 2004 and 2008 that subsequently underwent fetal brain MRI. The researchers compared the results of the fetal MRI and the last prenatal ultrasound before it.

Fetal ventriculomegaly was defined as dilated lateral ventricles with a mean transverse diameter of 10 mm or greater. The condition can be unilateral or bilateral and is often referred to as severe when the diameter is greater than 15 mm, said Dr. Mirza of the division of maternal-fetal medicine in the department of obstetrics and gynecology at the medical center.

It's regarded as isolated when the fetus has no other anomalies.

Isolated ventriculomegaly has been associated with multiple etiologies, "yet it's most often secondary to congenital aqueductal stenosis," he said.

VITALS

Major Finding: The diagnosis of ventriculomegaly was confirmed on fetal MRI in 21 cases (84%), while the fetal brain appeared normal on fetal MRI in the remaining 4 cases (16%).

Data Source: A single-center retrospective study of 25 cases of isolated lateral ventriculomegaly.

Disclosures: None was reported.

"Narrowing may be developmental or acquired, such as by infection, intraventricular hemorrhage, or a mass.

Diagnosis is generally based on prenatal ultrasound, but in recent years there has been a growing role for fetal MRI."

In this small, retrospective study, there were 25 suspected cases of isolated ventriculomegaly on prenatal ultrasound that subsequently underwent fetal MRI during the 4-year study period. The mean gestational age at the time of the index ultrasound was 28.1 weeks while

the mean gestational age at the time of the fetal MRI was 29.5 weeks.

Of the 25 cases, Dr. Mirza reported that 16 (64%) were unilateral and 22 (88%) were mild. The diagnosis of ventriculomegaly was confirmed on fetal MRI in 21 (84%) cases, while the fetal brain appeared normal on fetal MRI in the remaining 4 cases (16%).

Additional intracranial abnormalities that were not seen on prenatal ultrasound were identified in 5 of the 21 (24%) abnormal cases. These included three cases of agenesis of the corpus callosum, one case of interventricular hemorrhage, and one case of focal encephalomalacia.

Dr. Mirza acknowledged limitations of the study, including its retrospective design and small sample size, making it difficult to generalize its results and make management recommendations.

When asked by a meeting attendee what the clinical implications of the findings are, Dr. Mirza said that "the jury's still out on this question.

"In our small series, we did identify some cases where MRI did show other abnormalities, although I think it's still hard to appreciate what this practice would change in terms of our management.



This MRI shows dilatation of the occipital horns of the lateral ventricles.

"With the growing role of fetal MRI, we should have a better idea in the future."

He said more prospective studies with a systematic approach are needed to better evaluate and refine the role of fetal MRI in cases of isolated ventriculomegaly. ■

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PNE-PI-1 Rev. 02/10

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PRE.03.10.019.02

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