Value of Additional Fetal Magnetic Resonance Imaging in the Prenatal Diagnosis of Congenital Abnormalities

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목적: Our aim was to compare the value of fetal magnetic resonance imaging (MRI) and detailed ultrasound in the prenatal diagnosis of congenital abnormalities.

방법: This retrospective study reviewed the medical records of pregnant women and their neonates suspected to have congenital abnormalities by ultrasound, then had a detailed ultrasound examination and a fetal MRI in our institutions. The data were collected in 81 cases from 81 patients. The postnatal diagnoses were confirmed in 58 of 81 cases. Each prenatal-presumptive diagnosis based on detailed ultrasound examination and fetal MRI was compared with the postnatal-confirmed diagnosis.

결과: Supplemental information by fetal MRI was useful in 17 of 22 cases involving the central nervous system (CNS), 2 of 2 cases involving the thorax, 9 of 9 cases involving the genitourinary system, 2 of 8 cases involving the gastrointestinal system, and 10 of 10 cases involving complex malformations. Fetal MRI did not provide significantly useful information and facilitate a more accurate diagnosis except CNS abnormalities.

결론: Fetal MRI was not superior to an ultrasound examination in the prenatal detection of congenital anomalies. A detailed ultrasound examination performed by experienced obstetricians had satisfactory accuracy in the diagnosis of fetal anomalies compared to fetal MRI. The use of fetal MRI might be more useful to consider in appropriate cases in Korea. A greater effort on acquiring increased ultrasound knowledge and skill by competent obstetricians is needed.

Increased risk of cesarean section with premature rupture of membrane: indications and associated factors in nulliparous women

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목적: To investigate the cesarean section (CS) rate and its indication in women with premature rupture of membranes (PROM) compared to those with spontaneous labor at term.

방법: A retrospective study was performed in nulliparous women with PROM or spontaneous labor at 37+0–42+0 weeks’ gestation from January 2008 to June 2009. Maternal age, body mass index (BMI), Bishop scores, gestational age, hypertension, diabetes, delivery mode, indications for CS, neonatal outcome were analyzed.

결과: Among 767 women, 536 were in the spontaneous labor group and 231 were in the PROM group. There were significant differences between two groups in BMI, Bishop scores, gestational age. The frequency of CS (16.5% vs. 8.6%, p=0.001) and vacuum-assisted delivery (16.0% vs. 9.7%, p=0.001) was significantly higher in the PROM group compared to the spontaneous labor group. However, after adjusting confounding factors, increased CS rate was significantly associated with higher maternal age (odds ratio [OR] 1.15, 95% confidence interval [CI] 1.08, 1.23, p=0.001), higher BMI (OR 1.20, 95% CI 1.11, 1.31, p=0.001), and birth weight (OR 2.51, 95% CI 1.25, 5.09, p=0.010), but not with PROM or spontaneous labor. Neonatal outcome of the two groups were similar.

결론: Although CS rate was almost two times higher in PROM than spontaneous labor, a higher CS rate was only associated with maternal age, BMI, birth weight, but not with PROM or spontaneous labor.