Predicting value of different ultrasound markers for diagnosing morbidly adherent placenta and associated complications

Objectives: This study was conducted to evaluate the importance of different sonographic findings in the detection of MAP (Morbidly Adherent Placenta) among pregnant women, and then to assess the correlation between complications of delivery and ultrasonographic findings.

Methods: This analytical and prospective study was conducted on 150 pregnant women with previous history of cesarian section from 2015 to 2017. The sonographic findings were location of placenta, retroplacental aliasing, bulging towards the bladder, lacuna and lack of sonolucent area behind the placenta. These patients followed until delivery and complications were assessed.

Results: Of 150 previous cesarean sectioned patients, 101(67.3%) had not sonographic findings of MAP. Of those in which there is no sonographic findings of MAP none had any morbidity. 49 pregnant mothers had sonographic criteria of MAP prior to delivery, in which 39(80%) patients finally were had MAP during cesarean section. In 39 patients with confirmed MAP, 27 cases underwent hysterectomy and 12 received special procedures for uterus reservation, 8 cases had bladder rupture, 25 cases with ICU hospitalization, 25 cases needed blood transfusion. Special procedures included 8 cases of bilateral internal iliac arteries closure and partial myometrial resection, 3 cases of bilateral uterine arteries closure and hemostatic sutures and one case had only hemostatic sutures at the placental site. Of these 39 confirmed MAP, 31 patients(79%) had previa and 8 patients (20%) had anterior placenta without previa. In current study we had no mortality.

Conclusions: The most important sonographic factors on predicting MAP were location of placenta, aliasing and bulging, while lacuna and lack of sonolucent area had less value. We have demonstrste high accuracy, sensitivity, specificity, PPV and NPV for prediction of MAP by ultrasonography (93%, 100%, 90%, 79.59% and 100%, respectively)