Predicting of morbidly adherent placenta using a scoring system: a prospective study

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Objective

The aim of the study is to evaluate the performance of an ultrasound based scoring system to predict the diagnosis of morbidly adherent placentas (MAP).

Methods

This prospective study included pregnant women referred to our ultrasound unit between the years 2013-2015 because of previous ≥1 cesarean delivery or suspected MAP on previous sonographic examination. The scoring system includes: number and size of placental lacunae, obliteration of the demarcation line between the uterus and the placenta, placental location, color Doppler flow evaluation of the placenta and the interphase zone, as well as the number of previous cesarean operations. Based on the above, patients were classified into low, moderate and high probability for MAP. Pathologic diagnoses were available only in cases that underwent hysterectomy.

Results

258 pregnant women, enrolled in the study of whom 23 (8. 9%) were diagnosed of MAP according to the above mentioned criteria. An increase in detection rate of MAP from 2 (0. 9%) in the low probability subgroup to 5 (29. 4%) in the moderate probability and 16 (84. 2%) in the high probability subgroup (P<0. 0001). All the above sonographic findings were associated with MAP (P < 0. 0001). Constructing a receiver operating characteristic curve, the number of placental lacunae and obliteration of the demarcation line yielded an area under the receiver operating characteristic curve of 0. 94 (95% CI, 0. 86-1. 0).

Conclusion

The proposed scoring system is highly predictive of MAP in patients at risk. This allows adequate multidisciplinary team approach for planning and timing of the delivery.