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Objectives: The aim of this study is to compare the sonographic morphology and volume, and correlate with pregnancy outcome, the corpus luteum of patients in the first trimester who are bleeding from those who are not bleeding.

Methods: The corpus luteum volume of 40 patients were studied. The subjects included were divided into two groups: non-bleeders and bleeders. Sonographic morphology of the corpus luteum were classified as cystic or non-cystic. Their volumes were calculated, compared and analyzed.

Results: A comparison using independent t-test was done on the initial data among the bleeders versus the non-bleeders. The prevalence of cystic corpus luteum among non-bleeders (72%) is statistically higher compared to non-bleeders (27%) (p = 0.002, CI 95%). There was no statistical significant difference in the mean volume of corpus luteum of patients who developed bleeding (4.24 +/- 1.29 mL) compared to those who did not have bleeding (6.75 +/- 2.13 mL) (p = 0.097, 90% CI). Patients with first trimester bleeding showing corpus luteum with cystic morphology had a higher probability of pregnancy viability (76%) versus abortion (23%), as compared to corpus luteum with non-cystic morphology, with a pregnancy viability of 43% and abortion of 57%. Regression analysis showed a linear relationship between cystic corpus luteum and good pregnancy outcome (p = 0.028, CI 95%).

Conclusions: This study shows that the sonographic morphology of the corpus luteum is a predictor of good pregnancy outcome. Corpus luteum volume, on the other hand has no predictive significance on first trimester bleeding and pregnancy outcome.