Endometrial thickness and serum β-hCG in suspected late failure after oral misoprostol use for early pregnancy failure

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Abstract:
Objective: evaluation of ultrasonographic measurement of endometrial thickness and serum human beta chorionic gonadotropin (β-hCG) as predictors of late failure of complete abortion in patients designated for medical abortion with oral misoprostol.
Study Design: prospective observational study
Participants: The study included ٩٧ women attending the gynecology outpatient clinic at Al-Fayom and Cairo Universities between May ٢٠٠٧ and November ٢٠٠٧. All participants were complaining of residual vaginal bleeding ١٥ days or more after oral misoprostol medical induction of abortion done for them as an outpatient treatment for early pregnancy failure (with a maximum of ٥٦ days pregnancy). All participants were evaluated by transvaginal ultrasound scan and assaying serum β-HCG before doing cervical dilatation and endometrial curettage under anesthesia. According to results of histopathological examination of uterine contents, the study sample was divided into women with incomplete abortion (with evidence of products of conception; ١٩ cases, ١٩,٥٩٪) and cases with complete abortion (no evidence of products of conception; ٧٨ cases, ٨٠,٤١٪). The results of transvaginal scan and quantitative β-hCG were correlated to the histopathological results to calculate accuracy of tested markers in predicting complete abortion.
Results: Baseline characteristics for both groups were similar. Endometrial thickness of the two groups ranged from ١١,٢ ± ٣,٩ mm in the complete abortion group to١٤,٦ ± ٦,١ mm in the incomplete abortion group, which was statistically significant (P ٠,٠٠٣). Serum β-hCG was statistically different between the two groups (٧٣,٩٢ ± ٢٣,٨٦ and ١٠٩,٣٧ ± ٦٨,٣٦ P< ٠,٠٠١ respectively). Endometrial thickness of a cutoff value ١٢ mm has sensitivity of ٢

٨٨,٤٦٪, specificity of ٧٣,٦٨٪, positive predictive value (PPV) of ٩٣,٢٤٪ and positive likelihood ratio (LR+ve) of ٨٥,٥٧. On the other hand β-hCG has Sensitivity, Specificity, PPV and LR+ve of ٨٧,١٨, ٧٨,٩٥, ٩٤,٤٤ and ٨٥,٥٧ respectively.
Conclusion: quantitative serum human β -hCG as well as endometrial thickness is clinically useful as a diagnostic test in predicting late failure after medical abortion, but are merely supplements to the general clinical evaluation.
Key words: Transvaginal ultrasonography**,** Endometrial thickness, serum β-hCG, oral misoprostol, early pregnancy failure