



Is the hCG discriminatory zone a reliable indicator of intrauterine or ectopic pregnancy?

No. The human chorionic gonadotropin (hCG) discriminatory zone—the maternal serum b-hCG range above which a gestational sac should be consistently visible by ultrasonography (US) in a normal pregnancy—should not be used to determine the management of a hemodynamically stable patient who is suspected of having an ectopic pregnancy, according to this retrospective study.

Doubilet PM, Benson CB. Further evidence against the reliability of the human chorionic gonadotropin discriminatory level. J Ultrasound Med. 2011;30(12):1637–1642.

► EXPERT COMMENTARY

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Often used in the evaluation of early pregnancy, the hCG discriminatory zone is based on the assumption that a serum β -hCG level exceeding 1,000–2,000 mIU/mL in a woman who has a normal intrauterine pregnancy should be accompanied by a gestational sac that is visible via transvaginal US. When such a sac is not visible in the uterus, many practitioners conclude that the pregnancy is ectopic and tailor management accordingly.

In this study of women who were assessed

between the years 2000 and 2010, investigators reviewed the records of those who underwent US and hCG measurement on the same (index) day, had detectable hCG, had no US evidence of intrauterine pregnancy on the index day, and were subsequently found to have a viable intrauterine pregnancy. Among 202 women who met these criteria, the hCG level fell into the following ranges:

- below 1,000 mIU/mL (80.2%)
- 1,000–1,499 mIU/mL (9.4%)
- 1,500–1,999 mIU/mL (5.9%)
- 2,000 mIU/mL or higher (4.5%).

The highest hCG value observed was 6,567 mIU/mL; the highest level of hCG observed in a woman who later delivered a term infant was 4,336 mIU/mL.

A case for abandoning the zone?

Many clinicians (and malpractice attorneys) are familiar with unfortunate cases of women who underwent uterine curettage or were given methotrexate, based on an hCG level found to be in the discriminatory zone without accompanying evidence of intrauterine pregnancy, only to lose what was, in fact, a potentially viable pregnancy.

By demonstrating the high variability in hCG levels among women who had early intrauterine pregnancy without definitive findings on US, the authors make a strong case for abandoning the concept of the discriminatory zone altogether. 🚫

FAST TRACK

The highest hCG level in a woman who later delivered a term infant was 4,336 mIU/mL

WHAT THIS EVIDENCE MEANS FOR PRACTICE

Women's health providers often encounter hemodynamically stable patients who have early pregnancy of unknown viability or implantation site and who lack ultrasonographic (US) evidence of hemoperitoneum. **It is *not* appropriate to perform uterine curettage or administer methotrexate in this setting.** Instead, counsel these patients that the earliness of the pregnancy precludes definitive assessment of gestational status. Review with the patient the signs and symptoms of ruptured ectopic pregnancy, and arrange for follow-up hCG measurement and US assessment.

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