

# Ectopic Pregnancy and Emergencies in the First 20 Weeks of Pregnancy

Heather A. Heaton

## REFERENCES

- Griffey RT, Trent CJ, Bavolek RA, et al: "Hook-like effect" causes false-negative point-of-care urine pregnancy testing in emergency patients. *J Emerg Med* 44: 155, 2013. [PMID: 21835572]
- Gottlieb M, Wnek K, Moskoff J, et al: Comparison of result times between urine and whole blood point-of-care pregnancy testing. *West J Emerg Med* 17: 449, 2016. [PMID: 27429695]
- Kaplan BC, Dart RG, Moskos M, et al: Ectopic pregnancy: prospective study with improved diagnostic accuracy. *Ann Emerg Med* 28: 10, 1996. [PMID: 8669724]
- Anderson FW, Hogan JG, Ansbacher R: Sudden death: ectopic pregnancy mortality. *Obstet Gynecol* 103: 1218, 2004. [PMID: 15172855]
- Ankum WM, Mol BW, Van der Veen F, et al: Risk factors for ectopic pregnancy: a meta-analysis. *Fertil Steril* 65: 1093, 1996. [PMID: 8641479]
- Bouyer J, Coste J, Shojaei T, et al: Risk factors for ectopic pregnancy: a comprehensive analysis based on a large case-control, population-based study in France. *Am J Epidemiol* 157: 185, 2003. [PMID: 12543617]
- Vela G, Tulandi T: Cervical pregnancy: the importance of early diagnosis and treatment. *J Minim Invasive Gynecol* 14: 481, 2007. [PMID: 17630167]
- Ushakov FB, Elchalal U, Aceman PJ, et al: Cervical pregnancy: past and future. *Obstet Gynecol Surv* 52: 45, 1997. [PMID: 8994238]
- Malacova E, Kemp A, Hart R, et al: Long-term risk of ectopic pregnancy varies by method of tubal sterilization: a whole population study. *Fertil Steril* 101: 728, 2014. [PMID: 24388203]
- Aldin ES, Saadeh J, Ghulmiyyah L, Hitti E: Late post-hysterectomy ectopic pregnancy. *Emerg Med Aust* 24: 239, 2012. [PMID: 22672163]
- Clayton HB, Schieve LA, Peterson HB, et al: Ectopic pregnancy risk with assisted reproductive technology procedures. *Obstet Gynecol* 107: 595, 2006. [PMID: 16507930]
- Park JK, Elliott AC, Gentilello LM, Shari S: Systemic hypotension is a late marker of shock after trauma: a validation study of Advanced Trauma Life Support principles in a large national sample. *Am J Surg* 192: 727, 2006. [PMID: 17161083]
- Johnstone C: Vaginal examination does not improve diagnostic accuracy in early pregnancy bleeding. *Emerg Med Aust* 25: 219, 2013. [PMID: 23759041]
- Barnhart KT, Samuel D, Chung K, et al: Decline of serum hCG and spontaneous complete abortion: defining the normal curve. *Obstet Gynecol* 104: 975, 2004. [PMID: 15516387]
- Barnhart KT, Samuel M, Rinaudo P, et al: Symptomatic patients with an early viable intrauterine pregnancy: hCG curves redefined. *Obstet Gynecol* 104: 50, 2004. [PMID: 15229000]
- American College of Emergency Physicians: Clinical policy: critical issues in the initial evaluation and management of patients presenting to the emergency department in early pregnancy. *Ann Emerg Med* 60: 381, 2012. [PMID: 22921048]
- Dart R, Ramanujam P, Dart L: Progesterone as a predictor of ectopic pregnancy when the ultrasound is indeterminate. *Am J Emerg Med* 20: 575, 2002. [PMID: 12442232]
- Morgan BB, Kao A, Trent SA, et al: Effect of emergency physician-performed point-of-care ultrasound and radiology department-performed ultrasound examinations on the emergency department length of stay among pregnant women at less than 20 weeks' gestation. *J Ultrasound Med* 37: 2497, 2018. [PMID: 29574878]
- Kirk E, Papageorghiou A, Conduis G, et al: The diagnostic effectiveness of an initial transvaginal can in detecting ectopic pregnancy. *Hum Reprod* 22: 2284, 2007. [PMID: 17855406]
- Brown DL, Doubilet PM: Transvaginal ultrasound for the diagnosis of ectopic pregnancy: positivity and performance characteristics. *J Ultrasound Med* 13: 259, 1994. [PMID: 7932989]
- Dogra V, Papulati RM, Bhatt S: First trimester bleeding evaluation. *Ultrasound Q* 21: 69, 2005. [PMID: 15905817]
- Hammoud A, Hammoud I, Bujold E, et al: The role of sonographic endometrial patterns and endometrial thickness. *Am J Obstet Gynecol* 192: 1370, 2005. [PMID: 15902112]
- Cacciatore B, Stenman U, Ylosato P: Diagnosis of ectopic pregnancy by vaginal ultrasound in combination with a discriminatory serum hCG level of 1000 IU/L (IRP). *Br J Obstet Gynecol* 97: 904, 1990. [PMID: 2223681]
- Ko J, Cheung V: Time to revisit the human chorionic gonadotropin discriminatory level in the management of pregnancy of unknown location. *J Ultrasound Med* 33: 465, 2014. [PMID: 24567458]
- Lermann J, Segl P, Jud SM, et al: Low dose methotrexate treatment in ectopic pregnancy: a retrospective analysis of 164 ectopic pregnancies treated between 2000 and 2008. *Arch Gynecol Obstet* 289: 329, 2014. [PMID: 23912533]
- Hajenius PJ, Mol F, Mol BW, et al: Interventions for tubal ectopic pregnancy. *Cochrane Database Syst Rev* 1: CD000324, 2007. [PMID: 17253448]
- Practice Committee of the American Society for Reproductive Medicine: Medical treatment of ectopic pregnancy: a committee opinion. *Fertil Steril* 100: 638, 2013. [PMID: 23849842]
- Mol F, Mol BW, Ankum WM, et al: Current evidence on surgery, systemic methotrexate and expectant management in the treatment of tubal ectopic pregnancy: a systematic review and meta-analysis. *Hum Reprod Update* 14: 309, 2008. [PMID: 18522946]
- Menon S, Collins J, Barnhart KT: Establishing a human chorionic gonadotropin cutoff to guide methotrexate treatment of ectopic pregnancy: a systematic review. *Fertil Steril* 87: 481, 2007. [PMID: 17173905]
- Barnhart KT, Gosman G, Ashby R, Sammel M: The medical management of ectopic pregnancy: a meta-analysis comparing "single dose and multidose" regimens. *Obstet Gynecol* 101: 778, 2003. [PMID: 12681886]
- Lipscomb GH, Puckett KJ, Bran D, Ling FW: Management of separation pain after single-dose methotrexate therapy for ectopic pregnancy. *Obstet Gynecol* 93: 590, 1999. [PMID: 10214839]
- Alleyassin A, Khademi A, Aghahosseini M, et al: Comparison of success rates in the medical management of ectopic pregnancy with single-dose and multiple-dose administration of methotrexate: a prospective, randomized clinical trial. *Fertil Steril* 85: 1661, 2006. [PMID: 16650421]
- Jimenez-Caballo A, Rodriguea-Donoso G: A 6-year clinical trial of methotrexate therapy in the treatment on ectopic pregnancy. *Eur J Obstet Gynecol Reprod Biol* 79: 167, 1998. [PMID: 9720836]
- Ma OJ, Mateer JR, Reardon RF, Joing SA: *Ma & Mateer's Emergency Ultrasound*, 3rd ed. New York: McGraw-Hill Inc.; 2014.
- Aleman A, Althabe F, Belizan J, Bergel E: Bed rest during pregnancy for preventing miscarriage. *Cochrane Database Syst Rev* 2: CD003576, 2005. [PMID: 15846669]
- Neilson JP, Gyte GM, Hickey M, et al: Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database Syst Rev* 1: CD007223, 2010. [PMID: 20091626]
- Soper JT, Mutch DG, Schink JC: Diagnosis and treatment of gestational trophoblastic disease: ACOG Practice Bulletin No. 53. *Gynecol Oncol* 93: 575, 2004. [PMID: 15196847]
- Haas DM, O'Mathuna DP, Dowswell T: Interventions for nausea and vomiting in early pregnancy. *Cochrane Database Syst Rev* 9: CD007575, 2015. [PMID: 26328534]
- Diclegis [package insert]. Bryn Mawr, PA: Duchesnay USA, Inc.; 2013.