



Earlier predictors for treatment outcome among single dose methotrexate for an ectopic pregnancy

Gabriel Levin¹ · Amihai Rottenstreich¹

Received: 9 April 2019 / Accepted: 10 July 2019 / Published online: 18 July 2019
© Springer-Verlag GmbH Germany, part of Springer Nature 2019

Dear Editors,

We read with great interest the study of Brunello et al. in a recent issue of the Journal [1]. The authors address the important issue of early prediction of methotrexate (MTX) treatment success for an ectopic pregnancy (EP), specifically the prognostic significance of early kinetics in β -hCG. The authors should be congratulated for addressing this important issue which gains recent interest. Yet, there are some issues which warrant further clarification.

First, the authors state that MTX treatment protocol in their study was an intramuscular administration of MTX (1 mg/kg), while citing the seminal protocol developed by Stovall et al. [2]. It is interesting to underline that the aforementioned protocol by Stovall et al., and current guidelines [3] are a single dose MTX of 50 mg/m² of body surface area. More interestingly, the authors acknowledge their low success rate of treatment success and found no explanation for this issue. It might be recommended that treatment protocol should follow guidelines, this might aid in treatment success rate. Second, the study cohort is relatively small ($n = 121$) for current literature. This might explain why the authors have found that early β -hCG kinetics does not adequately predict treatment outcome and that initial serum β -hCG measurement was the only significant prognostic factor for MTX efficacy—this in contrast to recent literature that early β -hCG kinetics is indeed an early determinant of treatment success but the β -hCG level itself on day 1 is of no predictive value [4]. At Last, if an early predictors are on the spotlight, it should be acknowledged that earlier predictors have been studied and found to be predictive for MTX treatment success such as pretreatment β -hCG kinetics [4, 5].

We encourage further well designed prospective studies assessing follow-up protocols and early predictors for MTX treatment success in tubal ectopic pregnancy.

Author contributions All authors contributed to the manuscript. GL—project development, manuscript writing/editing, literature search, AR—literature search, manuscript writing/editing.

Funding There was no study funding or competing interest.

Compliance with ethical standards

Conflict of interest All authors declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent This article does not contain any studies with human participants performed by any of the authors.

References

1. Brunello J, Guerby P, Cartoux C, Yazigi A, Baujat M, Parant O et al (2019) Can early β hCG change and baseline progesterone level predict treatment outcome in patients receiving single dose Methotrexate protocol for tubal ectopic pregnancy? Arch Gynecol Obstet 299(3):741–745
2. Stovall TG, Ling FW, Gray LA (1991) Single-dose methotrexate for treatment of ectopic pregnancy. Obstet Gynecol 77(5):754–757
3. ACOG Practice Bulletin No 193 (2018) Tubal ectopic pregnancy. Obstet Gynecol 131(3):e91–e103
4. Levin G, Dior U, Shushan A, Gilad R, Benshushan A, Rottenstreich A (2019) Early prediction of methotrexate treatment success by 24-hour pretreatment hCG increment and day 1–4 hCG ratio. Reproduct BioMed. <https://doi.org/10.1016/j.rbmo.2019.02.005>
5. Levin G, Saleh NA, Haj-Yahya R, Matan LS, Avi B (2018) Predicting success of methotrexate treatment by pretreatment HCG level and 24-hour HCG increment. Int J Gynecol Obstet 141:70–73. <https://doi.org/10.1002/ijgo.12395>

✉ Gabriel Levin
Levin.gaby@gmail.com

¹ Department of Obstetrics and Gynecology, Hadassah-Hebrew University Medical Center, POB 12000, 91120 Jerusalem, Israel