Methotrexate use in ectopic pregnancy

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Abstract

Ectopic pregnancies, although accounting for less than 2% of all pregnancies, have significant consequences for patients and are a leading cause of maternal death. Therefore, it is crucial for clinicians to promptly identify this condition. Traditionally, treatment options have included expectant management, medical intervention with methotrexate, or surgical procedures. With recent innovations in medicine and imaging technologies it is possible to tell that diagnosing ectopic pregnancies earlier will be possible therefore, we have to find alternatives better than surgery which carry a lot of risks, to provide treatment to the ectopic.

MTX is a folic acid antagonist which can be an option for women who are contraindicated for surgeries, want to preserve fertility, or for atypical EP locations, where the surgical option is impossible. Despite its advantages, the use of MTX is not widely adopted in the UK, including university hospitals, and Northern European-Baltic countries such as Lithuania.

Methods: literature review was conducted, focusing on studies available in the PUBMED and MEDLINE databases from 2007 to 2022. Non-English papers were excluded from the analysis.

The findings reveal that successful management with MTX necessitates regular monitoring before and after treatment, which relies on collaboration between clinicians and patients. Ultrasound scans to assess endometrial thickness, ectopic pregnancy size, fetal heartbeat, as well as blood HCG levels, are essential diagnostic tools for predicting treatment outcomes. The primary factor contributing to low follow-up rates after MTX treatment was found to be inadequate communication between doctors and patients, as well as a lack of patient education. Importantly, this is a modifiable factor, and implementing an MTX treatment protocol in smaller countries like Lithuania would primarily require education on the use of MTX. Moreover, MTX treatment has been shown to yield economic benefits for healthcare systems.

In summary, optimizing the management of ectopic pregnancies involves exploring alternatives to surgery, such as MTX, which can effectively preserve fertility while minimizing risks. Promoting better communication and patient education is crucial for ensuring successful treatment outcomes and facilitating the adoption of MTX protocols in countries like Lithuania, ultimately benefiting healthcare systems economically.

Image

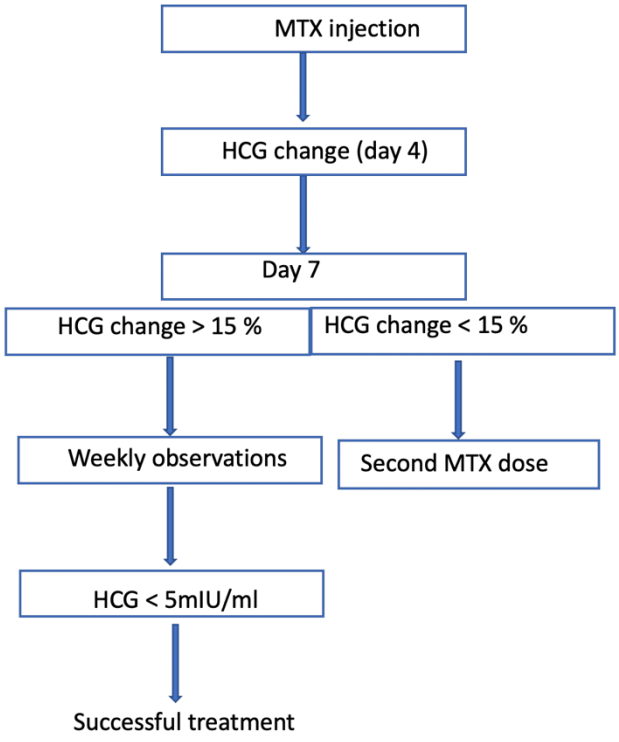


Figure 1: Internationally recognized treatment algorithm of MTX in ectopic pregnancy



Biography

Ieva is a final-year medicine student from Newcastle University (UK). She has an interest in health economics, obstetrics and gynecology, medical ethics, and sustainability. During her academic journey, Ieva dedicated herself to investigating various aspects of medical practice. She delved into the limitations of current protocols and explored the extent to which doctors have the freedom to make decisions in the best interest of their patients. In addition to her academic pursuits, Ieva actively engaged in practical research and auditing. She conducted an audit of primary care practices to assess the effectiveness of documentation for bisphosphonate use, aiming to enhance patient safety and improve healthcare outcomes. Moreover, she focused on standby electricity usage in sustainable primary practices, highlighting the importance of environmentally conscious approaches in the field of medicine. She participated in a student science conference, where she presented her research on Methotrexate use in ectopic pregnancy and won second place.