

Evaluation of treatment of previous cesarean scar pregnancy with methotrexate: a systematic review and meta-analysis

ABSTRACT

Background: Previous caesarean scar pregnancy is one type of ectopic pregnancy in myometrium and fibrous tissue of previous caesarean scar. One of the therapeutic methods of this type of ectopic pregnancy is treatment with methotrexate. Given various findings on the treatment of caesarean scar pregnancy with methotrexate and lack of global report in this regard, we aimed to achieve a global report on the treatment of CSP with methotrexate through related literature review and analysis of the results of the studies, to enable more precise planning to reduce complications of CSP. **Method:** This review study extracted information through searching national and international databases of SID, Embase, ScienceDirect, Scopus, PubMed, Web of Science (ISI) between 2003 and January 2020. To perform the meta-analysis, random-effects model and heterogeneity of the studies with I² index were investigated. Data were analysed using Comprehensive Meta-Analysis version 2. **Results:** In total, 26 articles with a sample size of 600 individuals were enrolled in the meta-analysis. According to the results of the study, the mean level of β -hCG was $28,744.98 \pm 4425.1$ mIU/ml before the intervention and was $23,836.78 \pm 4533.1$ mIU/ml after the intervention. The mean intraoperative blood loss (ml) was 4.8 ± 3.76 ml, mean hospital stay (days) was 11.7 ± 1.2 days, mean time for serum-hCG normalization (days) was 41.6 ± 3.2 days, success was 90.7% (95% CI: 86.7-93.5%), and complication was 9% (95% CI: 6.3-12.8%). **Conclusion:** The results of the current study show methotrexate significantly reduces β -hCG levels and can be effective in treating caesarean scar pregnancy and its complications.

Keyword: CSP; Caesarean scar pregnancy; MTX; Meta-analysis; Methotrexate