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ISSN: 2161-1459
Journal of Clinical & Experimental Pharmacology

Perspective

Adverse Effects of Diclofenac During Gestation on Fetus

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DESCRIPTION

Diclofenac has been used as a Non-Steroidal Anti-Inflammatory Drug (NSAID) since 1974 to treat the pain and swelling of rheumatic diseases. It is one of the most commonly used Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) in the world. Some studies have shown that non-steroidal anti-inflammatory drugs cause embryotoxicity and teratogenicity in laboratory animals, but there is no clear evidence of these effects in humans. Rheumatoid arthritis during pregnancy may require treatment to maintain the health of the mother and support the health of the fetus. However, there is a lack of understanding of the use of anti-inflammatory drugs such as diclofenac during pregnancy, and it is difficult to make these drugs available to patients. Information on the use of diclofenac during pregnancy is limited and inconsistent. Maternal diclofenac exposure in early pregnancy suggests a rapid accumulation of the drug in the fetus due to the embryonic adverse effects observed in animals. Animal studies have shown that exposure to diclofenac during pregnancy has resulted in significant changes in the histopathology of vital organs. Defects in Bile ducts, sinusoidal diameters, and testicular tissue were observed. Another study in experimental animals found that oral administration of diclofenac to pregnant mice during the premenstrual stage and during organ formation had significant effects on function, mortality, fetal reconstruction, and weight loss and length. In a similar study, abnormal visceral and skeletal abnormalities were observed in the fetus. There is no conclusive evidence that NSAIDs are safe for humans. Several reports have shown that the use of non-steroidal anti-inflammatory drugs causes fetal toxicity and teratogenicity in laboratory animals, but is unknown in humans. According to some instructions, diclofenac can be taken during the first and second trimesters of pregnancy, but not during the second trimester of pregnancy, but some advice not to take it during pregnancy. There are conflicting recommendations due to the lack of evidence available.

Late pregnancy diclofenac exposure is toxic to both the mother and the fetus. The risks include a higher risk of miscarriage and a lower birth weight. This study did not use time and dosage of Diclofenac used due to data during treatment (Diclofenac taken) was incomplete. This may affect the quality of evidence. The same research showed no evidence of fetal birth defects. These findings do not agree with studies from experimental animals confirming significant changes in embryonic morphological, organ, histopathologic, and cytological. Although this study was conducted in mammals, the difference may be a physiological difference between humans and rats, but caution is warned for further evaluation of the evidence. In a Quebec and Danish study, exposure to diclofenac during pregnancy increases the risk of spontaneous abortion. However, the combination of diclofenac/misoprostol is being studied in the Denmark. Misoprostol is a miscarriage-inducing drug used in unwanted pregnancies. This increased risk of spontaneous abortion may be due to the strongly suspected confounding effect of misoprostol. Evidence from laboratory animal studies suggests that there is evidence of prolonged gestation, teratogenicity, birth defects, and morphological changes in nerves and skeleton, as well as histopathological changes in the liver, kidneys, and testicles. Evidence has shown that a teratogenic effect on an animal's fetus can be teratogenic in humans. As a result, the hypothesis that Diclofenac is teratogenic in humans emerges from this analysis. The limitations of this study are the effect of Diclofenac on mother and child is a broad concept in the sense as a result failed to focus on the specific outcome; as a result, merging the estimate is incredibly hard. Therefore, narrative result may not show strong evidence. Although there are limited numbers of primary studies on the area, which enable us to produce sufficient evidence, available studies in humans and animals have suggested that exposure to Diclofenac during pregnancy has a negative effect on fetuses and mothers. Taking Diclofenac while pregnant has risk for both the mother and the fetus.

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Received: 04-Apr-2022, Manuscript No. CPECR-22-16583; **Editor assigned:** 07-Apr-2022, Pre QC No. CPECR-22-16583 (PQ); **Reviewed:** 22-Apr-2022, QC No CPECR-22-16583; **Revised:** 29-Apr-2022, Manuscript No. CPECR-22-16583 (R); **Published:** 06-May-2022, DOI: 10.35248/2329-6925.22.12.306.
Citation: Eliot W (2022) Adverse Effects of Diclofenac During Gestation on Fetus. J Clin Exp Pharmacol. 12:306.