

Editorial 3

Analgesics and Anti-inflammatory Drugs Prescription during Pregnancy

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Pregnant women encounter several challenges during pregnancy when managing health conditions including pain and fever compared to the general population.(1) Poorly managed pain, fever, and conditions necessitating the use of analgesics and anti-inflammatory drugs during pregnancy can have several adverse effects on the mother and her unborn child. (2, 3) Generally, the use of most medications during pregnancy is not without risks to the mothers and their unborn children. (1, 4) This editorial aims to address analgesics and anti-inflammatory drugs prescription during pregnancy and to suggest suitable recommendations to improve pregnancy outcomes.

During pregnancy analgesics and anti-inflammatory drugs are used solely or with other drugs in treating different kinds of health conditions such as pain, rheumatic diseases, urinary tract infection, malaria, tuberculosis, dengue, chikungunya, etc. (3, 5, 6) Moreover, some anti-inflammatory drugs like low-dose acetylsalicylic acid (aspirin) are used to reduce the risk for preeclampsia, and its related morbidity and mortality (preterm birth and intrauterine growth restriction) .[2] Fever during pregnancy including pyrexia of unknown origin (PUO) is associated with several poor maternal and perinatal outcomes including maternal morbidity and mortality, preterm birth, premature rupture of membranes (PROM), fetal anomalies, intra uterine fetal demise (IUFD), development attention deficit hyperactivity disorder (ADHD) and autism.(5) Such poor pregnancy outcomes associated with fever necessitate urgent treatment. However, the use of analgesics and anti-

inflammatory drugs is not without risks and there is limited research about their safety during pregnancy. (2, 4) The challenges exist when pregnancy occurs with preexisting health conditions such as chronic rheumatic diseases, where drugs are needed during pregnancy. Some anti-rheumatic drugs have potential maternal or fetal toxicity, for example, nonsteroidal anti-inflammatory drugs (NSAIDs) which are known to be effective anti-inflammatory, antipyretic and analgesic drugs; but should be avoided in the third trimester due to the risks of premature closure of the ductus arteriosus. (3)

Although pain in pregnancy exists, there is limited research addressing the impacts of pain on maternal and perinatal outcomes. (6) Ray-Griffith, et al. reviewed 144 articles that studied the evaluation and management of pre-existing chronic pain in pregnancy, chronic pain associated with pregnancy, and chronic pain in relation to the mode of delivery. They recommended seven guidelines for chronic pain management during and after pregnancy: a) complete history and physical examination; b) monitor patients for alcohol, nicotine, and substance use; c) collaborate with the patient to set treatment goals; d) develop a management plan; e) for opioids, use lowest effective dose; f) formulate a pain management plan for labor and delivery and g) discuss reproductive health with women with chronic pain. (6)

Even for long-used drugs during pregnancy, which are considered to be safe in pregnancy at the recommended dose, some side effects were reported recently. (4) For example, there have been recent concerns about the safety of the use of acetaminophen (paracetamol); which is the preferred antipyretic/analgesic for pregnant women worldwide; when taken during early pregnancy. These include negative impacts on offspring reproductive development (cryptorchidism and hypospadias). (4)

This indicates the need for continued monitoring of drug safety on unborn children exposed to drugs during pregnancy until puberty and adulthood. In other words, first approval of drug safety does not guarantee safety forever.

The need for proper management of pain, fever or any pre-existing health condition that require treatment during pregnancy and the absence of conclusive data regarding the usage of analgesic/anti-inflammatory drugs during pregnancy; put more pressure on researchers to come up with a conclusive solution without jeopardizing women and unborn children health. Based on the evidence literature, the current situation of analgesics and anti-inflammatory drugs during pregnancy remains a real challenge that needs to be overcome. We came up with the following recommendations to overcome these challenges; aiming to improve maternal health and pregnancy outcomes:

1. Analgesics and anti-inflammatory drugs should only be prescribed by qualified health professionals, after a thorough diagnosis and determination of the needs for prescription. However, at present, this is not the case, as taking over-the-counter drugs is common during pregnancy. The successful approach of any patient should start with a complete history and physical examination and with the lowest effective dose if needed. (6)
2. Whenever possible, health professionals should avoid using drugs during pregnancy. The majority of pregnant women's conditions (aches and pains) can be treated without the use of analgesic/anti-inflammatory drugs. For example, some pregnant women may experience headaches often, so taking enough rest may be the best treatment approach. In case drugs are needed, using the lowest dose of the prescribed analgesic and/or anti-inflammatory drugs for the minimum period to relieve the discomfort during periods of ill health during pregnancy should be the strategic approach. (4. 6)

3. Establishing effective collaboration between health professionals and women even before pregnancy. (6)
Encouraging preconception counseling to implement appropriate preventive measures, and to manage any existing health conditions that may require treatment including analgesics and anti-inflammatory drugs during pregnancy, such as chronic pain, rheumatic diseases, PUO, malaria, visceral leishmaniasis (Kala-azar) and tuberculosis. For example, unplanned pregnancy, especially among women with rheumatic diseases can pose a threat to the health of the woman and the fetus. Therefore, appropriate management of rheumatic diseases during pregnancy (consisting of a multidisciplinary care team) can prevent maternal end-organ damage and minimize the adverse effects of the disease on pregnancy outcomes. (3)
4. Honest and accurate sharing of information with pregnant women is essential to support them in making choices that are in the best interests of their unborn babies. These information include thorough counseling of pregnant women about using medications during pregnancy and the probable risks based on the current evidence. (1) In case a pregnant woman encounters drug side effects such as teratogenic or fetotoxic effects, the risk must be assessed on an individual base and a risk management strategy must be determined. (1)
5. More research is needed regarding drug safety in pregnancy including analgesics and anti-inflammatory drugs. Women should not be excluded from drug trials, especially when there are preliminary benefits to mother and her fetus, and the benefits outweigh the risks of the potential tested drug. Currently, pregnant women depend on drugs that are usually studied on the general population and the results may not be suitable for pregnant women due to physiological changes during pregnancy.

In conclusion, prescription of analgesics and anti-inflammatory drugs during pregnancy is often challenging. Not prescribing such drugs, may lead to increased maternal and fetal morbidity and mortality including abortion, PROM, preterm birth, anomalies, IUFD, etc. Preconception counseling, timely investigations, and early appropriate drug doses and duration may help prevent the aforementioned poor outcomes. Further research trials are needed to ensure safety of analgesics and anti-inflammatory drugs during pregnancy; and whenever possible, pregnant women should participate in such researches. This is in the hope that drug safety during pregnancy should not be extrapolated from the results of observational studies on the general population.

In this issue of The Journal, there is a cross-sectional study entitled (Analgesics and Anti-inflammatory Prescription for Pregnant Women in the Military and Khartoum Teaching Hospitals, Khartoum, Sudan, 2016) authored by Azhari Elamin and his colleagues. The study showed that various analgesics and anti-inflammatory drugs were used to treat minor to moderate pain, headaches and/or fever during pregnancy. Acetylsalicylic acid (aspirin) was mostly used in low doses for its prophylactic/therapeutic effects of reducing fetal and maternal ill health during pregnancy. The researchers reported that occasional analgesic/anti-inflammatory drugs can be safely taken during pregnancy. However, in the light of possible long term side effects on the offspring such as cryptorchidism and hypospadias, children born to mothers who used analgesics/anti-inflammatory drugs should be followed up until puberty and adulthood.

References

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