Pregnancy and Epilepsy: Understanding the Challenges and Management

Dr Kamna Bakshi

Sr Consultant (OBS & GYNAE) Shivalik Hospital, Faridabad, Haryana

DOI: 10.29322/IJSRP.13.10.2023.p14232
https://dx.doi.org/10.29322/IJSRP.13.10.2023.p14232

Paper Received Date: 12th September 2023
Paper Acceptance Date: 13th October 2023
Paper Publication Date: 22nd October 2023

I. Introduction

Epilepsy, a neurological disorder characterized by recurring seizures, affects a significant number of women in their reproductive years. While most pregnancies in women with epilepsy proceed without complications, there is a higher risk of maternal and perinatal complications compared to the general population. The management of epilepsy during pregnancy is challenging, particularly for those taking anti-epileptic drugs (AEDs). Although there is no permanent cure, proper preconception counseling and a multidisciplinary approach can greatly improve outcomes for both the mother and baby.

Preconception Counseling:

Preconception counseling plays a crucial role in improving pregnancy outcomes for women with epilepsy. It involves coordination between neurologists, physicians, and obstetricians. Initiating folic acid supplementation at least three months prior to conception is important to prevent fetal malformations and delayed neurological development. Women who have been seizure-free for more than 9-12 months have a good chance of maintaining seizure control during pregnancy. Some women may require adjustments to their medication regimen before or during pregnancy, and those on multiple AEDs may be switched to one or two safer drugs.

Effect of Pregnancy on Epilepsy:

During pregnancy, approximately 60% of women with epilepsy will remain seizure-free, while 20% may experience an increase in seizure frequency, and 15% may have a reduced frequency. There is a small risk of experiencing seizures during labor. Several factors contribute to poor seizure control during pregnancy, including decreased sleep quality and quantity, increased emotional lability, and stress. Additionally, hormonal changes, water retention, and stress can trigger seizures by decreasing the concentration of AEDs in the body.

Fetal Risks:

Generally, the risk to the fetus is low. However, there is a slightly increased risk of intrauterine demise and fetal hypoxia associated with maternal seizure activity. Maternal trauma during a seizure or placental abruption can indirectly lead to fetal injury. Prematurity, preeclampsia, and intrauterine growth restriction are also potential risks. The use of AEDs carries an increased risk of major congenital malformations, and there is a higher likelihood of the child developing epilepsy later in life.

Maternal Risks:

Women with epilepsy face a tenfold increased risk of maternal mortality compared to those without epilepsy. This risk can be attributed to seizure-related complications, which are influenced by the physiological changes of pregnancy. Sudden unexpected death in epilepsy (SUDEP) may also contribute to maternal mortality. Preeclampsia is more common in women with epilepsy.

Symptoms of Epilepsy During Pregnancy: Seizures during pregnancy can be partial or generalized, affecting different parts of the brain. Symptoms include convulsions, headache, mood changes, fainting, confusion, memory loss, tongue biting, absent or repeated blinking of eyes, and nausea/vomiting.

Anti-Epileptic Drugs (AEDs):

Different AEDs carry varying risks of congenital malformations. Carbamazepine, lamotrigine, levetiracetam, oxcarbazepine, phenobarbital, phenytoin, and topiramate have associated risks but can be considered relatively safe during pregnancy, with some requiring dose adjustments. Sodium valproate carries the highest risk and should be avoided if possible. Most AEDs are safe during breastfeeding, but some precautions may be necessary.

Management of Epilepsy in Pregnancy:

Effective management of epilepsy during pregnancy requires a multidisciplinary team specializing in the care of pregnant women with epilepsy. Preconception evaluation, folic acid supplementation, increased antenatal visits, monitoring of AED levels, and fetal assessments are crucial. Induction of labor may be considered in the 39th week. Adequate sleep, avoiding triggers, and maintaining AED compliance are important. Intrapartum care should focus on pain management, hydration, and seizure prevention. Postnatal care involves tapering AED dosages and encouraging breastfeeding while ensuring the safety of the infant. Contraception counseling is essential to avoid unplanned pregnancies.

In summary, epilepsy management during pregnancy requires careful planning, monitoring, and a collaborative approach to ensure optimal outcomes for both mother and baby. By addressing potential risks, providing appropriate care, and promoting effective contraception, healthcare professionals can significantly improve the well-being of women with epilepsy during this critical period.

REFERENCES

[1] Tomson, T., Battino, D., Bonizzoni, E., Craig, J., Lindhout, D., Sabers, A., Perucca, E., & Vajda, F. (2011). Dose-dependent risk of malformations with antiepileptic drugs: An analysis of data from the EURAP epilepsy and pregnancy registry. The Lancet Neurology, 10(7), 609-617.

[2] Meador, K. J., Baker, G. A., Browning, N., Clayton-Smith, J., Combs-Cantrell, D. T., Cohen, M., Kalayjian, L. A., Kanner, A., Liporace, J. D., Pennell, P. B., Privitera, M., Loring, D. W., & NEAD

[3] Study Group. (2013). Cognitive function at 3 years of age after fetal exposure to antiepileptic drugs. New England Journal of Medicine, 368(25), 2477-2486.

[4] Viale, L., Allotey, J., Cheong-See, F., Arroyo-Manzano, D., Mccorry, D., Bagary, M., Mignini, L., Hogg, M., Zamora, J., Thangaratinam, S., & Khan, K. S. (2015). Epilepsy in pregnancy and reproductive outcomes: A systematic review and meta-analysis. The Lancet, 386(10006), 1845-1852.

[5] Holmes, L. B. (2013). Teratogen-induced limb defects. American Journal of Medical Genetics Part C: Seminars in Medical Genetics, 163(4), 246-258.

[6] Hunt, S., Craig, J., Russell, A., & Morrow, J. (2008). Epilepsy in pregnancy: Maternal and fetal outcomes. Epilepsy Research, 81(1), 1-13.

[7] Meador, K. J., Penovich, P., Baker, G. A., Pennell, P. B., & Liporace, J.

[8] D. (2018). Antiepileptic drug use in women of childbearing age. Expert Review of Neurotherapeutics, 18(1), 83-91.

[9] Morrow, J., & Russell, A. (2017). Update on the management of epilepsy in women of reproductive age. Journal of Family Planning and Reproductive Health Care, 43(2), 109-114.

[10] Tomson, T., Battino, D., Bonizzoni, E., Kochen, S., & Meador, K. (2015). Comparative risk of major congenital malformations with eight different antiepileptic drugs: A prospective cohort study of the EURAP registry. The Lancet Neurology, 14(9)

AUTHORS

First Author – Dr KAMNA BAKSHI, Sr Consultant (OBS & GYNAE) Shivalik Hospital, Faridabad, Haryana