A CASE OF SPONTANEOUS ABORTION WITH THE USE OF ANTIMIGRAINE DRUGS: A CASE REPORT

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ABSTRACT
Almost all drugs taken during pregnancy increase the risk of birth defects, underweight babies, still born births, cognitive deficits and other disastrous changes. Even then due to frequent minor/major complications during pregnancy use of drugs cannot be ruled out completely. Migraine in pregnancy is a common problem and exists for a finite period. We report here a case of pregnant woman diagnosed with migraine who was put on beta blockers and topiramate. She had an unexpected miscarriage following this therapy in 1st trimester. Present study advocates high precaution and strict monitoring of pregnancy when anti migraine drugs are in use.

KEY WORDS
Propanolol, Flunarizine, Topiramate, Migraine, Pregnancy

INTRODUCTION
Miscarriage or spontaneous abortion is the spontaneous end of a pregnancy at a stage where the embryo or fetus is incapable of surviving independently, generally defined in humans at prior to 20 weeks of gestation. Miscarriage is the most common complication of early pregnancy and 25% of women will experience a miscarriage in their lifetime. Most drugs have potential adverse effects during pregnancy, and the risk extends to both the mother and foetus. Hence, judicious use of pharmacologic agents in either the mother or the foetus is obligatory.

Migraine is a chronic episodic disease and is common during pregnancy, but fortunately this combination of conditions obviously exists for only a finite period. The greatest frequency of migraine attacks occurs during the first trimester and it is in the first trimester that the fetus is at greatest risk from abortifacient and teratogenic drugs and when very early pregnancy may be undiagnosed. Ergot alkaloids (including methysergide) should be avoided during pregnancy because of their teratogenicity, and most other drug classes should be used only when unavoidable. For a given individual, attack frequency varies throughout life. Sometimes, if migrainous headaches are recurring twice a month or more, a prophylactic treatment is required. There is a variety of medication usually employed in the migraine prophylaxis. The use of prophylactic agents during pregnancy should be the exception, not the rule, and preferably only during the second and third trimesters. Management of migraine during pregnancy is a challenging task and hence benefits of various drugs have to be weighed against side effects. Generally, two different types of drugs are required: prophylactic (preventer) and painkiller during attack. Propranolol and flunarizine have proven to be useful tools in migraine prophylaxis.

Vertigo is a well known accompanying symptom during a migraine attack in 30 to 72% of migraine patients. Flunarizine is a calcium entry blocker that has been shown to be effective both in the prophylaxis of migraine and in the treatment of vertigo. Several pharmacological sites of action of this drug are thought to contribute to its clinical efficacy. Its inhibitory effect on the vestibular activity might be important, especially for the treatment of vertigo. Propranolol is a non-selective beta-adrenoceptor blocking drug licensed for the treatment of hypertension, angina, migraine prophylaxis, management of essential tremor, anxiety, adjunctive management of thyrotoxicosis and prophylaxis of upper gastro-intestinal bleeding in patients with portal hypertension and oesophageal varices. Topiramate is an anticonvulsant and it is also Food and Drug Administration (FDA) approved...
for, and most frequently prescribed for, the prevention of migraines.

CASE REPORT

Present case is of a woman, suffering from migraine headache. Migraine is a mysterious disorder characterized by pulsating headache, usually restricted to one side, which comes in attacks usually lasting 4-48 hours and is often associated with sensitivity to light and sound, nausea, vomiting etc. Patient was diagnosed with c/o diffuse left or right vascular headache, vomiting, mood swings, drowsiness and duration of attack lasting for 2-3 days. She was started on initial regimen of Topiramate (50 mg), Propranolol hydrochloride (40mg) and Flunarizine dihydrochloride (5 mg). On the day of diagnosis patient was weighing 54 Kg, pulse rate 88/Min and blood pressure 121/76 mm/Hg. EEG and MRI of brain was normal. She was regular on her regimen up to six months from the day of diagnosis. After six months, she gave up the regimen with complaint of weight gain, blemishes on face and increased drowsiness. After eight month patient again followed her regimen to next three months with complaint of lethargy. She followed the regimen regularly during these three months. After this regimen period she conceived and gave up her regimen. Two months after conception patient again experienced severe headache, nausea, vomiting, flushing on face & she started with same regimen i.e. (Topiramate 50mg, Propranolol hydrochloride 40mg and Flunarizine dihydrochloride 5mg) without the consent of physician. She abruptly had miscarriage after one week of taking the regimen. She is having a history of cesarean section with no history of previous miscarriage.

DISCUSSION

The safety of Propanolol is controversial due to reports of adverse effect on fetus and studies shows negative effects on uteroplacental and fetal hemodynamic. All beta blockers cross placenta in significant amount by simple diffusion. Fetal catecholamines play an important role in programming subsequent development of β receptor mediated cellular response, a process that could be interfered with by prenatal exposure to β blockers. Maturation of lung may be affected and be interfered with by prenatal exposure to β blockers. Problems in Early Pregnancy: Options for Therapy. CNS Drugs. 2005; 19(6):465-481.

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