Case Report

Postpartum Psychosis: Management Rarely with Extreme Doses of Drugs

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Abstract

A 26-year-old, 155 cm height, 72 kg primigravid female was admitted for safe confinement on December 3, 2015. She was posted for emergency lower segment cesarean section under regional anesthesia for the indication, cephalopelvic disproportion nonprogression of labor. The patient and her husband had given their consent for surgery owing to the patients' fear that she may pass out if she wept start due to pain during induced labor. Spinal anesthesia was performed at L_3L_4 space using 27-gauge needle and 0.5% heavy bupivacaine 1.9 ml along with buprenorphine 0.1 ml. The patient was very stable hemodynamically throughout the surgical procedure which lasted for 50 min and gave birth to male baby weighing 3.2 kg. The immediate postoperative period was uneventful with stable vital signs except the patient was under deep sleep. Three hours after shifting, the patient had vomiting and three more hours later, she neither recalled having given birth nor did she recognize her baby. She exhibited violent psychiatric behavioral movements at the intervals of 3 h thereafter. Hence, the diagnosis of postpartum psychosis was suspected and managed meticulously. The patient was discharged on 7th postoperative day.

Key words: Emergency cesarean section, postpartum psychosis, rapid neuroleptization, spinal anesthesia

Introduction

Postpartum psychosis is a rare and serious mental illness that can affect a parturient mother. It usually starts within a few days or weeks of giving birth and can develop suddenly, within just a few hours. Puerperal psychosis (PP) is considered a psychiatric emergency that typically requires inpatient emergency treatment in a hospital. However, a woman with postpartum psychosis is a potential risk to her baby and can cause a mother to kill her child out of love. This case report signifies the importance that the requirement of drug exceeded than the routine treatment.

Case Report

A 26-year-old, 155 cm height, 72 kg primigravid female was admitted to ANH for safe confinement on December 3, 2015. She was posted for emergency lower segment cesarean section under regional anesthesia for the indication, cephalopelvic disproportion nonprogression of labor. On preanesthetic examination, her pulse rate was 90/min with blood pressure 120/75 mm Hg. The blood investigation showed hemoglobin 12.4 g%, blood sugar 106 mg/dl, and the blood group AB^+.

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Anesthetic management

After the patient was shifted and positioned on the operating table, the patient informed that she was prone to pass-out if she wept and requested that care is taken that she did not weep. Since the history was nonspecific for any psychiatric problem and further there is no definite pharmacological prophylaxis for the postoperative psychiatric problems prevention, anesthesia procedure was proceeded. After adequate preparation, subarachnoid block was performed and given 0.5% heavy bupivacaine 1.9 ml along with buprenorphine 0.1 ml using a 27-gauge spinal needle.

Since the patient had requested not be allowed to weep, the patient was induced to sleep. Hence, 6 mg pentazocine and 25 mg ketamine were given. Patient delivered an alive, male baby weighing 3.2 kg and injection oxytocin 20 units was given. Surgery went on well with stable vitals. At the time

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of shifting, patient's vitals were normal except the patient was sleeping. Since it is not uncommon for some patients to continue sleeping during shifting process even for mild sedation, there was no worry. However, some postoperative psychiatric problems had been hunched. The patient was shifted safely to her room at 11 p.m. Since patient had rigor, injection tramadol intravenous (IV) 50 mg was given.

During the immediate postoperative period, the patient was sleeping deeply with stable vitals. Three hours after shifting, since the patient had vomiting, injection ondansetron 1 amp, 2 ml, 4 mg IV was given and then 3 h later, the patient exhibited violent psychiatric behavioral movements. She neither recollected having given birth nor did she recognize her baby. She exhibited violent psychiatric behavioral movements at the intervals of 3 h. As there was no neurological finding to suspect cerebral venous thrombosis (CVT), the diagnosis of postpartum psychosis was suspected and confirmed by a psychiatrist opinion. She was given seven doses of injection haloperidol 5 mg and injection promethazine 50 mg per dose from 8 a.m. onward for the next 24 h period with meticulous monitoring since violent psychiatric behavioral movements recurred every 3 h. During the initial course of management, the patient received only two doses of injection hydrocortisone 100 mg IV and one dose of injection low-molecular-weight heparin –40 mg enoxaparin sodium - 4000 IU per 0.4 ml subcutaneous as a prophylactic measure for CVT and cerebral edema. Hence, totally, 35 mg haloperidol and promethazine 350 mg were given during the 24 h postoperatively. The patient was conscious, oriented, and started oral fluids and later solid. After the seventh dose of parenteral medication, all the parenteral medications were stopped and she was given only one dose of tablet olanzapine 5 mg with tablet lorazepam 2 mg. Since patient slept continuously for the whole night and woke up with well orientation and with no psychiatric behaviors, even the oral medication was discontinued. During predischarge detailed enquiry, the patient revealed her very stern childhood brought with her alcoholic father. This would have created a violent atmosphere, which in turn would have been the foundation for the present condition. The patient was discharged on the 7th postoperative day with advice to undergo pharmacological prophylaxis by a psychiatrist to avoid postpartum psychosis during her consecutive pregnancy (if any).

Discussion

Postpartum psychosis or PP is a term that covers a group of serious mental illness with sudden onset of psychotic symptoms that can affect a parturient mother following childbirth. It occurs in 1–2/1000 childbearing women within the first 2–4 weeks after delivery[1] and affects 50–75% of parturient mother.[2] This is more common in primigravid in which case there is a high likelihood of recurrence in successive childbirth. During antenatal checkup, (a) thorough detailed antenatal history and (b) education of the expectant women and their family are very important to mitigate the risk of developing postpartum psychosis. However, often, out of fear of stigma or misunderstanding, women hide their condition.[3] Puerperal mania was first described Friedrich Benjamin Osiander in 1797.[4] This psychosis is an endogenous, heritable illness with rapid onset,[5] benign episodic course, and response to mood normalizing and stabilizing treatments.

Most postpartum depressions are thought to be related to hormonal factors[6] with sudden drop in estrogen and progesterone hormones levels that affect the brain's mood chemistry in a way that can lead to sadness, low mood, and depression that lingers. In some cases, a woman's thyroid hormone may decrease too. Stress hormones may have an added effect on mood. Some women might experience this more than others. However, the factors involved are not yet well-understood. Molecular genetic studies suggest that there is a specific heritable factor.[7] There is evidence of linkage to chromosome 16.[8] Postpartum psychosis is more likely to occur if a close relative has also experienced it.[7] Obstetrical factors have also been associated with a risk of postpartum psychosis including pregnancy complications, delivery complications, cesarean section, delivery of a female infant, preterm birth, and first pregnancy.[9,10] Emotional factors such as disrupted sleep pattern, difficulty in handling even minor problems, anxious in the ability to care for a newborn, struggle with sense of identity, and fear of having lost control over one's life can contribute to postpartum depression.

The early symptoms often include feeling high, not sleeping, feeling spiritual, talking more than usual, or seeming confused. The later symptoms consist of (i) hallucinations, usually hearing voices and (ii) delusions, beliefs that are unlikely to be true (for example, believing you have won the lottery). The combination of hallucinations and delusional thinking can severely disrupt the subjects' perception, thinking, emotions, and behavior. The patient may also experience some other symptoms such as (a) mania-high mood, talking, and thinking too much or too quickly, feel "on top of the world," or be more sociable than normal, (b) loss of inhibitions, (c) paranoia, feeling suspicious, or fearful, (d) restlessness or agitation, (e) low mood, signs of depression and be withdrawn or tearful, with a lack of energy, loss of appetite, anxiety, irritability or trouble sleeping, and (f) severe confusion due to mood changing rapidly with alternating mania and depression at the same time.

Without treatment, these psychoses can last for many months; however, with modern therapy, they usually resolve within a few weeks. A small minority follows a relapsing pattern, usually related to the menstrual cycle. Mothers who suffer a puerperal episode are liable to recur during repeat pregnancy or after abortion. However, patients remain at risk for episodes of illness after subsequent pregnancies (about 90%) as well as episodes that are unrelated to childbirth.[11] If not treated immediately, the postpartum psychosis can get worse rapidly. The illness could cause her to neglect or harm her baby or herself. A majority of women with postpartum psychosis

make a full recovery and often very quickly provided that they receive the right treatment and the patient may not realize that she is ill.

PP is considered a psychiatric emergency that typically requires inpatient treatment in a hospital with psychiatric unit called a mother and baby unit. For some women, this allows them to continue bonding with their baby and gives them confidence in their role as mother. Typically, a woman with postpartum psychosis would be prescribed one or more of the following drugs: (1) An antidepressant, which balances mood-altering chemicals in the brain. It helps to correct low mood, irritability, lack of concentration, and sleeplessness, allowing the mother to function normally and cope better with her new baby. (2) An antipsychotic (neuroleptic) blocks the effect of dopamine (a chemical that transmits messages in the brain). Rapid neuroleptization[12] is a method in which neuroleptics are given in high dosage and may be indicated when there are severe overactivity and delusions. In this method, injection haloperidol can be given ranging from 1 to 30 mg as an initial dose with a maximum of 100 mg over a period of 24 h. This has been well-tolerated in all cases, with no reported major complications. However, they should be used with caution because of the danger of severe side effects including neuroleptic malignant syndrome,[13] QT prolongation, difficulty with breathing, dizziness, drowsiness, muscle trembling, jerking, stiffness, unusual tiredness or weakness, and sudden cardiac arrest. (3) Electroconvulsive (electroshock) treatment is highly effective.[14] (4) Mood stabilizing drugs such as lithium are also useful in treatment and possibly the prevention of episodes in women at high risk (i.e., women who have already experienced manic or puerperal episodes). If lithium is prescribed, regular blood tests are needed at least every 3 months to make sure lithium levels are not too high or low.

Suicide is rare and infanticide extremely rare during these episodes. It does occur that it is usually due to profound postpartum depression (melancholic filicide) when it is often accompanied by suicide.[15] However, a woman with postpartum psychosis is a potential risk to her baby or others around her and can cause a mother to kill her child out of love.[16] Furthermore, care should be taken when attempting to get treatment for a woman with this condition because the symptoms of the illness itself can contribute to a reluctance or downright refusal of care.[17]

Regarding antipsychotic medication and breastfeeding, the concentrations in the breast milk appear to vary widely. Breastfeeding every 2 h causes interrupted sleep patterns; sleep deprivation is a well-established risk factor for either precipitation or worsening of an episode of mood disorder.[18,19] Breastfeeding is not typically recommended in women receiving lithium therapy because of secretion of the agent into breast milk; some data suggest a potential risk for neonatal toxicity.[19] While less information is available on other antidepressants, there have been no reports of serious adverse events related to exposure to these medications.

Current research indicates that prophylactic interventions may be instituted near or at the time of delivery to decrease the risk of postpartum illness. Several studies demonstrate that women with histories of bipolar disorder or PP benefit from prophylactic treatment with lithium[20] instituted either before delivery (at 36 weeks' gestation) or no later than the first 48 h postpartum. Further, the estrogen[21] prophylaxis remains purely investigational.

Legal status: Some women suffering from postpartum psychosis have been known to take their own lives (suicide), and in rare, tragic cases kill their child or both. Several nations including Canada, Great Britain, Australia, and Italy recognize postpartum mental illness as a mitigating factor in cases where mothers kill their children.[22] In the United States, such a legal distinction is not currently made.[22] Britain has had the Infanticide Act since 1922. In 2009, Texas Legislator Jessica Farrar proposed a bill that would recognize postpartum psychosis as a defence for mothers who kill their infants.[23] Under the terms of the proposed legislation, if jurors concluded that a mother's "judgment was impaired as a result of the effects of giving birth or the effects of lactation following the birth," they would be allowed to convict her of the crime of infanticide, rather than murder.[22] The maximum penalty for infanticide would be 2 years in prison.[22]

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Conflicts of interest

There are no conflicts of interest.

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