

Labour Analgesia in a Patient with Dengue Fever - Case Report

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Introduction

Labour pain is an acute pain experience by women during child birth. This pain has a little contribution in the progress of labour and can be relieved without interfering mother & child health.¹ In USA 60% women prefer painless delivery, but no data is available in Bangladesh. Different modern techniques have been used to treat labour pain. Epidural is the gold standard & very popular technique for labour analgesia all over the world,² but when any intervention in a patient is contraindicated due to some bleeding abnormalities/diseases then alternate technique may be the choice. Fentanyl is available and very common drug in our country. It can be used intravenously either continuous infusion or intermittent bolus dose. For labour analgesia fentanyl intermittent bolus dose is more suitable than infusion.³

The Case:

We treated labour pain of a 25 years primigravida, medical student had got admitted into hospital. Her blood pressure, pulse rate, fetal heart sound, fetal movement and progress of labour were normal. She was in first stage of labour, cervix was 4cm dilated, fetal heart rate was between 130-140 b/m. She had been suffering from fever, body ache and weakness. Clinically and her investigations showed that she had been suffering from dengue fever. Her platelet count was very low 25,000 per cmm, IgG & IgM positive. She was transfused 4 bags of fresh frozen plasma. In this case epidural intervention was contraindicated.⁴ We used alternatively intra venous fentanyl. We explained the patient about the details of the procedure & effects of drugs on both mother &

baby, a written consent had been taken. Patient had been monitored blood pressure, SpO₂, pulse rate, respiratory rate & level of consciousness. A normal saline infusion had been started with a 20G cannula. Fentanyl 2 ml (100microgram) had been diluted with 8ml of normal saline. The solution contained 10 microgram fentanyl per ml. Initially 50 microgram fentanyl had been injected intravenously slowly. Initially VAS score reduced to ± 1 . An intermittent dose of 10 microgm (1ml) fentanyl had been given intravenously after 30 minutes. Then 10 microgram (1ml) fentanyl had been given 15 min interval during second stage of labour and when cervix was fully dilated 50 microgram fentanyl had been injected IV due to increased intensity of pain. Total 200 microgram fentanyl had been used 200 in 2 hrs till delivery of the baby.

Results:

As fentanyl is a potent analgesic drug it had reduce pain score up to (± 1). At the end, dose of fentanyl had been increased and as a result pain score did not raised. Total fentanyl 200 micro-gm had been used in 2 hrs. So we can say adequate pain had been relieved with a minimum dose of fentanyl. Fetal crying and heart rate were within normal limit. Maternal blood pressure and SpO₂ were within normal limit.

Discussion:

Epidural and other intervention for pain management are contraindicated in patient with abnormal bleeding profile^{3,4}. As a result various short acting lipid soluble narcotics can be used successfully intravenously for labor pain. Sufentanyl, Alfentanyl, Remifentanyl, Fentanyl are suitable drugs. Fentanyl unlike sufentanyl

can be used for IVPCA. Fentanyl intermittent bolus dose is cost effective than continuous infusion⁵. Remifentanyl is a ultra short acting narcotic which metabolized in the blood and doesn't cross the placental barrier, so it is very suitable for continuous infusion. Low dose fentanyl or sufentanyl combined with low concentration local anesthetic drug are suitable for epidural analgesia. Other narcotic like morphine should not used because it may cause fetal respiratory depression. Pethidine can be used intramuscularly but should be used 3 hours before expected delivery time. Fentanyl is available and cheaper in Bangladesh and commonly used in Anesthesia in our country. It is 100 times potent than morphine and 800 times potent than pethidine. Fentanyl does not produce active intermediate metabolites and onset of action is early and half life is less than one hour. IV fentanyl 50-100 microgram/hr does not causes any harmful effect to mother and neonate.⁸ Remifentanyl is suitable for continuous infusion in labour pain as it does not cross the placental barrier⁹. It is formulated in Glycin which is neurotoxic so should not use in intrathecal or epidural route. Inhalational agents like Entonox also can be used for labour pain, it produce nausea, vomiting and giddiness, drowsiness. It has been already withdrawn from the market due to air pollution. Sevoflurane 2-3% in air-oxygen mixture is better than entonox but an electronic device - patient controlled inhalational analgesia (PCEA) is require and it is expensive and not available in our country.

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