Anaesthetic Management Of A Patient With Varicella Undergoing Emergency Caesarean Section

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Citation

Abstract
We report a case of 27 year old primigravida at 39 weeks gestation suffering from chicken pox requiring emergency caesarean section that was managed with general anaesthesia. Anaesthetic management and clinical implications are discussed here.Key words: chicken pox, caesarean section, General anaesthesia.

INTRODUCTION
Chicken pox is caused by Varicella zoster virus (VZV) which is a DNA virus. VZV causes two distinct diseases; chicken pox as the primary infection and later when VZVreactivates shingles or herpes zoster. Chicken pox is highly contagious and transmitted by respiratory droplets and by direct contact with vesicle fluid. This infection has its clinical presentation as high fever followed by generalized vesicular lesions. Pruritic skin lesions start after 1-2 days of fever on the face and then progressed to all over body becoming pustular.

The diagnosis of chicken pox is performed on the basis of clinical history and clinical classical sign and symptoms. It is a mild and self limiting disease in children but severe complications like papular rash, hepatitis, meningitis, encephalitis and bleeding diathesis can occur in adult and immuno-compromised person. We present the case of a primigravida with varicella who was posted for an emergency caesarean section and successfully managed.

CASE REPORT
A 27 year old primigravida at 39 weeks gestation, weighing 57kg of ASA II physical status was taken for emergency caesarean section. Indication for caesarean section was foetal distress. Eight days before she was suffering from fever, malaise, mild dry cough and development of rash began on face then progressed to trunk and abdomen. The rash began 2 days after fever and becoming pustular. Crusting of rash began on 5th day after appearance. There was no history of exposure to varicella and she had not been previously immunized. She had received acyclovir therapy. She was on antihypertensive treatment with tab. Atenolol 5mg O.D. since 3 months regularly.

Because of presence of vesiculopapular rash all over the body, we decided to take the case under general anaesthesia. The patient was counseled and informed consent had taken. IV line secured and vitals are monitored.

In premedication IV Metoclopramide 10mg and IV Ranitidine 50mg was administrated 15 minutes before induction. Patient was preoxygenated for 5 minutes then induction done with injection Thiopentone 5mg/kg and tracheal intubation was facilitated with inj. Scoline 1.5 mg/kg using cricoid pressure. Patient was maintained on controlled ventilation using 100% oxygen and a muscle relaxant inj. Vecuronium (0.02mg/kg as intermittent bolus dose at every 20 minutes) throughout procedure. Following delivery of baby IV inj. Midazolam 1mg and IV Fentanyl 75 mcg was administered because opioids and sedative cross the placental barrier and may affect the fetus, should be avoided until the umbilical cord has been clamped. Oxytocin
varicella syndrome. The most common manifestation of this syndrome is scarring of skin. If a woman acquires a primary infection with in 5 days before and 2 days after delivery her newborn is at risk for disseminated varicella infection. This infection leads to death in 25% of cases.

Women who are not immune to varicella, but are exposed may be treated with varicella-zoster immunoglobulin (VZIG). VZIG should be administered with in 96 hours of exposure. If VZIG is not available, prophylaxis can be provided by acyclovir (800 mg orally 5 times daily for 7 days). If a patient develops acute varicella, with or without prophyllaxis, she should be treated with oral acyclovir or valacyclovir. If a patient develops evidence of pneumonia, encephalitis, severe disseminated infection, or if she is immuno-compromised, she should be hospitalized and treated with intravenous acyclovir (10 mg/kg every 8 hours for 10 days).

In order to prevent neonatal varicella, the newborn should be isolated from the mother until all her lesion crusted and dried. The infant should also be treated immediately with either VZIG or acyclovir. There are no data indicating that treatment of the mother infected with varicella will prevent congenital varicella infection.

The optimal technique of anaesthesia for these patients has been the subject of debate. Regional or general anaesthesia can be used but risks and benefits of whichever technique we want to be used should be considered. As in our case we choose general anaesthesia because there were active or infected lesions on the skin at the site for placement of regional block. Regional anaesthesia may introduce virus into the central nervous system resulting in meningitis or encephalitis, especially when viraemia is present. It may be safe in recurrent herpes infection because viraemia is absent. Brown et al suggested that the use of pencil point needle may reduce the risk of introduction of viral material into the CNS and regional anaesthesia should be performed at a level where no skin lesions are present. Dave et al reported a case where a primigravida with chicken pox was posted for emergency caesarean section. Spinal anaesthesia was avoided due to extensive skin lesions on the back and caesarean section was performed under general anaesthesia.

In varicella infected patients general anaesthesia is associated with pneumonia and decrease in the immune function response postoperatively. Nitrous oxide and inhalational agents like halothane, isoflurane, sevoflurane have all been implicated. So if general anaesthesia has to be
used then avoid inhalational agents by use of opioids, muscle relaxants and 100% oxygen.\(^{(7)}\)

The anaesthesiologist and any person handling the case must exercise caution. A live attenuated vaccine is routinely recommended for all susceptible health workers and is the preferred method for preventing varicella in health care settings. The efficacy of the varicella vaccine is 70-80% in adult and higher in children. Susceptible pregnant women should be offered the vaccine immediately after delivery and secure contraception is indicated for a minimum of one month after the second dose of vaccination.

**CONCLUSION**

We conclude that both regional as well as general anaesthesia can be used but risks and benefits of each technique should be considered carefully.

**References**

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