

STUDY REPORTS ON VARICELLA ZOSTER IN TERM PREGNANCY AND ITS OUTCOMEPranjal Nimbalkar¹, N. S. Kshirsagar², Manisha Laddad³**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: Chickenpox is caused by the Varicella-Zoster virus, a member of the herpes virus family. The same virus also causes herpes zoster (shingles) in adults. This infection can be widely detected in developing countries, especially for those tropical countries. It is presented with fever and vesicular lesions all over body.^(1,2) Even the pregnant women can get chicken pox, and this becomes an important concern. In this specific paper, we have given the details and discussed 5 cases on chicken pox in term pregnancy and its outcome. We have also discussed the management of VZV (Varicella Zoster Virus) infection in pregnancy.

KEYWORDS: Chicken pox, pregnancy, Management.

INTRODUCTION: Chicken pox is a viral infection. Chicken pox can be spread very easily to others. You may get chickenpox from touching the fluids from a chickenpox blister. A person with chicken pox becomes contagious 1 to 2 days before their blisters appear. They remain contagious until all the blisters have crusted over. This disease is considered as an important infectious disease in surveillance program. In the past, the disease usually occurred in the pediatric population.^(1, 2) However, due to the improved sanitation in this day, the prevalence of the disease has reduced. This disease is also seen in adult age group.

In developing countries especially tropical country, chicken pox more is common.⁽³⁾ In adult infection, the patients might suffer from many complications of chicken pox, especially for lung complications. Similar to other population, the chicken pox among the pregnant subjects can be seen, and this becomes an important concern. It needs to be managed properly for good maternal and fetal outcome.

STUDY REPORTS: We have reported 5 booked patients, 36 weeks pregnancy affected with chicken pox from year 2013-2014 in KIMS Karad. Out of them three patients came with complains of fever 2-3 days prior followed by vesicular skin lesions all over the body. The other two patients came with complaints of cough, fever and vesicular lesions all over the body. Three of them delivered within a span of 20-25 days after developing chicken pox. Two of them delivered within 7 days after appearance of lesions but they had visited the OPD prior to appearance of clinical illness with history of their younger child suffering from chicken pox. All of them had significant exposure to VZV (Varicella-zoster virus) from their household members with active chicken pox infection. Two out of five patients remember of not suffering from chicken pox in their childhood nor did they receive immunization. The other three patients didn't remember their past history. All the patients have received treatment with Acyclovir for 7 days prior to delivery. The two patients who delivered within 7 days received (ZIG) Zoster Immunoglobulin within 3days prior to appearance of lesions clinically.

And newborns have received injectable Acyclovir. Mother and their newborns both were healthy and suffered no complications postnatally.



Diagnosis of Chicken Pox in Pregnancy: As earlier mentioned, the diagnosis of chicken pox, either in pregnant or non-pregnant subjects can be easily performed on the basis of clinical history and clinical classical signs-symptoms. There is no need for laboratory diagnostic tool. However, there are also some available laboratory diagnostic tools including virus/viral antigen detection, virus isolation, and identification or serological diagnosis. These tools might be useful for atypical cases. The cost utility of those laboratory diagnostic tools is still not approved.

DISCUSSION:

Management of VZV infection in pregnancy: The implications of primary VZV infection in pregnancy for the mother and for the fetus vary with the period of gestation. For the mother, the risk of adverse effects is greatest in the third trimester, whereas for the fetus the risk is greatest in the first and second trimesters.

- A. Maternal risk:** In normal adults, the mortality and morbidity of primary VZV infection is greater than in children. Only about 2% of all cases occur in adulthood, but they account for 25% of all VZV-related deaths. Pneumonitis is 25 times more common in adults. Zoster immunoglobulin (ZIG), given prophylactically at the time of exposure, is known to prevent or reduce the severity of chickenpox.

Acyclovir, an antiviral agent, shortens the duration of illness in young adults if administered during the incubation period or within 24 hours of the onset of the rash.^(4,5) When administered prophylactically (7 to 9 days after family exposure) it may be up to 84% protective against infection and able to modify the illness in the remaining family members.⁽⁶⁾ For the pregnant subject, the treatment by acyclovir is recommended for special precautions.

- B. Fetal risk:** Chickenpox in pregnancy may result in fetal varicella which is usually benign and self-limiting. Occasionally, it produces a characteristic pattern of abnormalities known as "congenital varicella syndrome" (CVS). CVS very occasionally follows maternal zoster infection.

Recommendations:**Zoster immunoglobulin (ZIG)**

- All pregnant women who have significant exposure to VZV infection (defined as "living in the same household as a person with active chickenpox or herpes zoster or face-to-face contact with a person with chickenpox or uncovered zoster for at least 5 minutes"), who have no history of chickenpox and who are seronegative (or serological testing is not readily available), should be offered ZIG.^(7, 8)
- ZIG should be administered within 72 hours of exposure for maximal effect, although it may provide some benefit up to 96 hours⁽¹⁰⁾
- ZIG is ineffective, and should not be given, once clinical illness is established.
- The recommended dose is 2mL for children 0-5 years, 4mL for children 6-12 years and 6mL for adults.⁽¹²⁾
- Administration is by intramuscular injection, with few adverse effects other than local discomfort reported. This can be lessened if the ZIG is at room temperature when administered.
- ZIG should never be given intravenously.⁽¹³⁾

Acyclovir: There is no high level evidence on the use of acyclovir in pregnancy. Based on consensus view, we recommend:

- Consideration should be given to using oral acyclovir prophylaxis for susceptible pregnant women with significant exposure (defined above) who have not received ZIG, or who have any underlying risk factors, such as chronic lung disease, cigarette smoking, systemic corticosteroid treatment, impaired immunity or are in the second half of pregnancy.⁽¹¹⁾
- Intravenous acyclovir should be given for varicella pneumonitis or other complications at any stage of pregnancy. These complications include respiratory symptoms, neurological symptoms, hemorrhagic rash and/or continued fever or appearance of new lesions after 6 days.
- Extrapolation from data in children suggests that patients receiving systemic corticosteroid therapy or those with underlying immunodeficiency should be treated with intravenous acyclovir at the earliest sign of chickenpox.
- The recommended intravenous dose for treating VZV infection in adults and infants is 10-20mg/kg every 8 hours.
- The oral dose for adults is 800mg five times daily.
- The use of oral acyclovir in neonates is not recommended.

Prevention of Chicken Pox in Pregnancy: The routine infection control process can be useful in prevention of chicken pox. Specific vaccine for chicken pox is available. However, the cost-effectiveness of this new vaccine is assessed in many countries. In the endemic country, there is still evidence that the chicken pox vaccine is not cost-effective for general population and should be

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considered for the risk groups such as medical personnel. For the pregnant subject, there is no routine recommendation for vaccination for chicken pox in case with or without clear previous history of infection. The safety in case of vaccine is used is also a big concern.

CONCLUSION: The above study report concludes that with good antenatal care and perinatal care and with proper treatment, the outcome of newborn is good and mother is also recovered from disease completely.

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