PROPHYLAXY AND MANAGEMENT OF AHICKEN POX IN PREGNANCY

Dr parichehr Pooransari,perinatalogist in sbmu,**shohada** hospital

Augest 2025

Open Access Review

Varicella Zoster Virus Infection and Pregnancy: An Optimal Management Approach

by Ana Ion [1,2], Olguța Anca Orzan [1,2,*] and Beatrice Bălăceanu-Gurău [1,2]

[1] Faculty of Medicine, 'Carol Davila' University of Medicine and Pharmacy, 020021 Bucharest, Romania
[2] Department of Dermatology, 'Elias' University Emergency Hospital, 011461 Bucharest, Romania
[*] Author to whom correspondence should be addressed.

Pathogens **2025**, *14*(2), 151; https://doi.org/10.3390/pathogens14020151

Submission received: 12 January 2025 / Revised: 31 January 2025 / Accepted: 3 February 2025 / Published: 5 February 2025

UNIVERSITY HOSPITAL WISHAW
WOMEN'S SERVICES DIRECTORATE

NHS Lanarkshir

Guideline for the Management of Chickenpox in Pregnancy

Chickenpox in Pregnancy

Green-top Guideline no. 13
January 2015 (minor update 2024)

Can varicella be prevented in the pregnant woman at her initial antenatal visit?

- Women booking for antenatal care should be asked about previous chickenpox/shingles infection or varicella vaccination. [Updated 2024]
- Women who have not had chickenpox, or are known to be seronegative for chickenpox, should be advised to avoid contact with chickenpox and shingles during pregnancy

Can varicella infection be prevented in the pregnant woman who gives a history of contact with chickenpox or shing

- Pregnant women with an uncertain or no previous history of chickenpox, or who come from tropical or subtropical countries, who have been exposed to infection should have a blood test to determine VZV immunity or non-immunity.

Can varicella infection be prevented in the pregnant woman who gives a history of contact with chickenpox or shingles?

- If the pregnant woman is not immune to VZV and she has had a significant exposure, she should be offered Post Exposure Prophylaxis (PEP).
- Oral antiviral therapy i.e. aciclovir (or valaciclovir) is recommended as the first choice for PEP by the UKHSA.
- It should be given from Day 7 to 14 post exposure.

Can varicella infection be prevented in the pregnant woman who gives a history of contact with chickenpox or shingles?

- When there is a contraindication or adverse effects to antivirals, VZIG may be considered as PEP. VZIG is effective when given up to 10 days after contact (in the case of continuous exposures, this is defined as 10 days from the appearance of the rash in the index case)

Can varicella infection be prevented in the pregnant woman who gives a history of contact with chickenpox or shingles?

- If there is further exposure to chickenpox and seroconversion has not occurred, a second course of antiviral can be prescribed from seven days after the exposure.
- If VZIG is used for PEP, it can be repeated if the exposure occurs three weeks or more after the last dose.

What are the maternal risks of varicella in pregnancy?

- Clinicians should be aware of the increased morbidity associated with varicella infection in adults, including pneumonia, hepatitis and encephalitis. Rarely, it may result in death.
- Pneumonia may be more severe at later gestational ages due to the effects of the gravid uterus on respiratory function.
- reduces the duration of fever and symptomatology of varicella infection in immunocompetent adults if commenced within 24 hours of developing the rashes.

How should the pregnant woman who develops chickenpox be cared for?

- (isolation-hygiene-symptomatic treatment)
- **Oral aciclovir** should be prescribed
- if they present within 24 hours of the onset of the rash
- and if they are 20+0 weeks of gestation or beyond.
- Use of aciclovir before 20+0 weeks should also be considered.

Should women be referred to hospital?

- if she develops respiratory symptoms or any other deterioration in her condition.
- Women who develop the symptoms or signs of severe chickenpox should be referred immediately to hospital

When and how should the woman with chickenpox be delivered?

- A planned delivery should normally be avoided for at least 7 days after the onset of the maternal rash to allow for the passive transfer of antibodies from mother to child,
- The risk of acquiring infection from an immunocompetent individual with herpes zoster in non-exposed sites (e.g. thoracolumbar) is remote but can occur.
-

- However, disseminated zoster or exposed zoster (e.g. ophthalmic) in any individual or localised zoster in an immunosuppressed patient should be considered to be infectious as the viral shedding may be greater.

What are the risks to the fetus of varicella infection in pregnancy and can they be prevented or ameliorated?

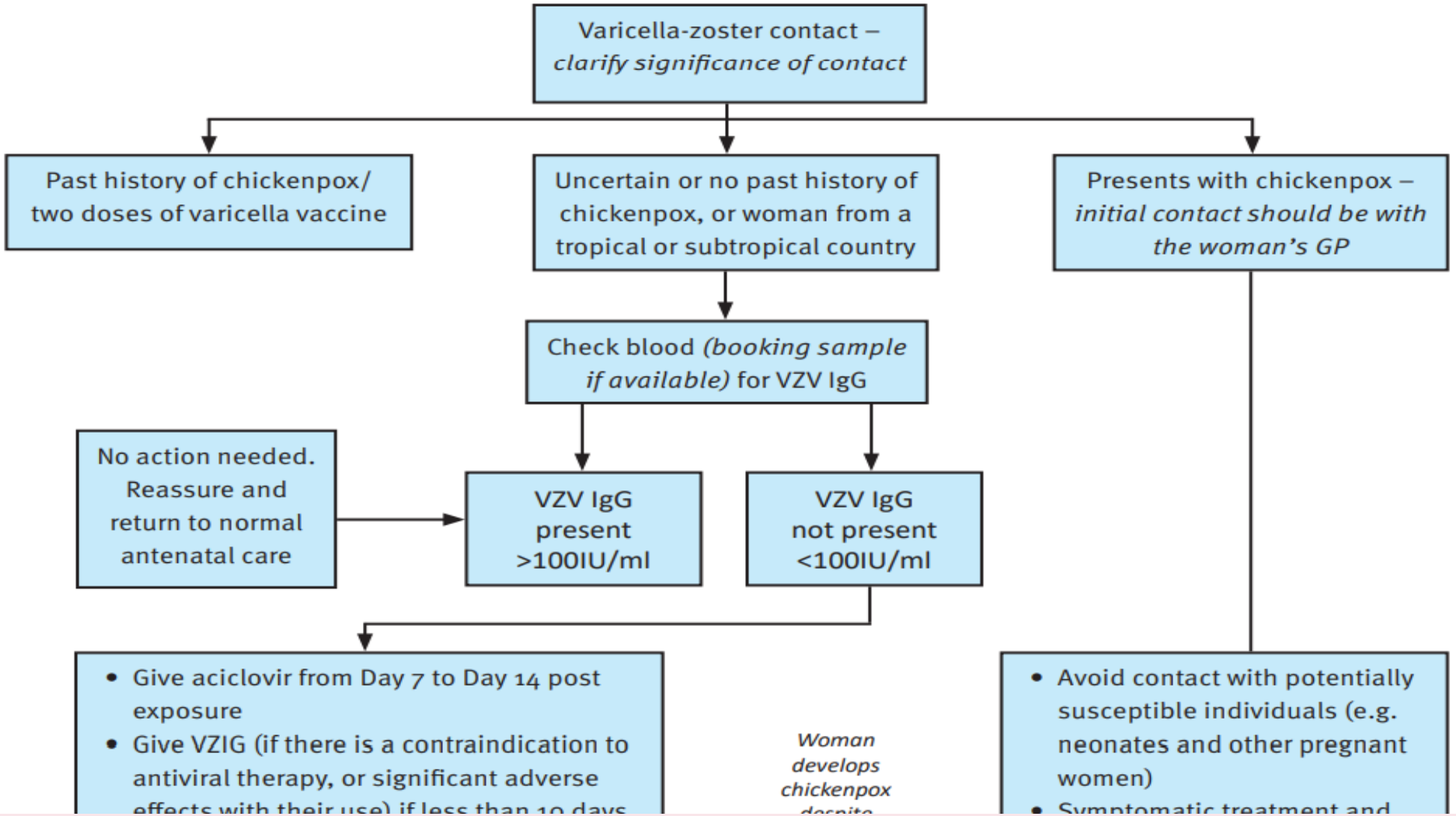
- However, delivery may be required to facilitate assisted ventilation in cases where varicella pneumonia is complicated by respiratory failure.
- FVS is characterised by one or more of the following: skin scarring in a dermatomal distribution; eye defects (microphthalmia, chorioretinitis or cataracts); hypoplasia of the limbs; and neurological abnormalities (microcephaly, cortical atrophy, mental retardation or dysfunction of bowel and bladder sphincters).
- It does not occur at the time of initial fetal infection but results from a subsequent herpes zoster reactivation in utero and only occurs in a minority of infected fetuses.

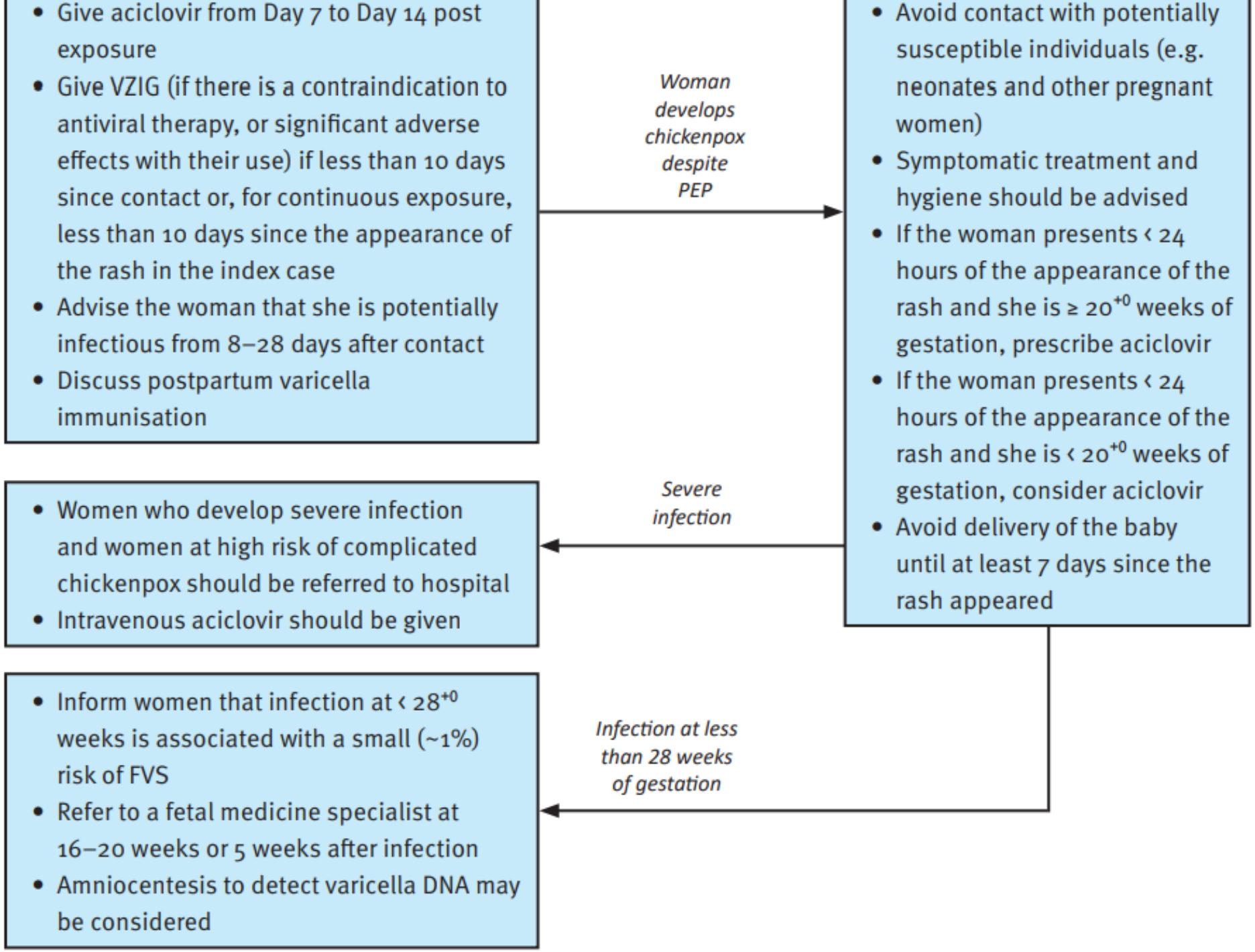
What are the neonatal risks of varicella infection in pregnancy and can they be prevented or ameliorated?

- If maternal infection occurs in the last 4 weeks of a woman's pregnancy, there is a significant risk of varicella infection of the newborn.
- A planned delivery should normally be avoided for at least 7 days after the onset of the maternal rash to allow for the passive transfer of antibodies from mother to child, provided that continuing the pregnancy does not pose any additional risks to the mother or baby
-

- Severe chickenpox is most likely to occur if the infant is born within 7 days of onset of the mother’s rash or if the mother develops the rash up to 7 days after delivery.

Appendix I. Algorithm for the management of varicella-zoster contact in pregnancy




• Give aciclovir from Day 7 to Day 14 post exposure
• Give VZIG (if there is a contraindication to antiviral therapy, or significant adverse effects with their use) if less than 10 days since contact or, for continuous exposure, less than 10 days since the appearance of the rash in the index case
• Advise the woman that she is potentially infectious from 8–28 days after contact
• Discuss postpartum varicella immunisation
Woman develops chickenpox despite PEP
• Avoid contact with potentially susceptible individuals (e.g. neonates and other pregnant women)
• Symptomatic treatment and hygiene should be advised
• If the woman presents < 24 hours of the appearance of the rash and she is ≥ 20+0 weeks of gestation, prescribe aciclovir
• If the woman presents < 24 hours of the appearance of the rash and she is < 20+0 weeks of gestation, consider aciclovir
• Avoid delivery of the baby until at least 7 days since the rash appeared
Severe infection
• Women who develop severe infection and women at high risk of complicated chickenpox should be referred to hospital
• Intravenous aciclovir should be given
Infection at less than 28 weeks of gestation
• Inform women that infection at < 28+0 weeks is associated with a small (~1%) risk of FVS
• Refer to a fetal medicine specialist at 16–20 weeks or 5 weeks after infection
• Amniocentesis to detect varicella DNA may be considered


Thank
you!