University Hospitals Plymouth NHS Trust

MATERNITY GUIDELINES

Varicella Zoster Virus

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1. Introduction

Chickenpox, the primary infection caused by varicella-zoster virus (VZV), in pregnancy may cause maternal mortality or serious morbidity. It may also cause fetal varicella syndrome (FVS) and chickenpox of the newborn. However, the actual risk of complications occurring is low.

2. Booking

Women booking for antenatal care should be asked about previous chickenpox / shingles infection. A past history of chickenpox is sufficient enough to diagnose immunity and the women can be reassured. Universal screening for Varicella is not recommended.

Women who have not had chicken pox or are known to be seronegative for VZV, should be advised to avoid contact with chicken pox and shingles during pregnancy and to inform healthcare workers if potential exposure without delay.
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3. Contact

If pregnant women with an uncertain or no previous history of chickenpox has contact with chicken pox or shingles blood should be tested immediately for VZV antibodies (VZV IgG). Use booking blood if available, discuss with microbiology. Immunoglobulin must be given within 10 days of initial contact in order to be effective.

A careful history should be taken to confirm the significance of the contact. This includes:

- The type of VZV infection i.e.chickenpox or shingles.
- The timing of exposure.
- The closeness and duration of contact.

Individuals with chicken pox are considered infectious 48 hours prior to onset of rash until crusting of lesions. Shingles are considered infectious from the vesicular fluid only.

A pregnant woman who develops a chickenpox rash should be isolated if attending for an assessment.

4. Prevention

4.1 Contact and VZV IgG +

No action needed. Reassure. The woman is immune.

4.2 Contact and VZV IgG –

Give VZIG if less than 10 days since contact AND ≤ 20 weeks.

If ≥ 20+1 give oral aciclovir at 800mg four times a day from days 7 to 14 after exposure.

Non-immune pregnant women who have been exposed to chicken pox should be managed as potentially infectious from 8-28 days after exposure if they receive immunoglobulin and from 8-21 days after exposure if they do not.

During this period they should absence themselves from contact with other susceptible individuals and all immunosuppressed patients regardless of history of prior infection.

5. The pregnant women who develops chickenpox

Oral aciclovir should be prescribed for pregnant women with chickenpox if they present within 24 hours of the onset of the rash and if they are 20+ weeks of gestation or beyond. Use of aciclovir before 20+0 weeks should also be considered.

The women should remain at home. She is infectious until the lesions have crusted over. However she should be advised to contact her doctor immediately if she develops respiratory symptoms or any other deterioration in her condition.

It is important to recognise that severe infection can lead to pneumonia, hepatitis and encephalitis. Any women presenting with chest symptoms, neurological symptoms, haemorrhagic rash or bleeding should be referred immediately to hospital for observation and treatment.

A hospital assessment should be considered in the absence of these symptoms if the woman has a history of smoking, chronic lung disease, is immunocompromised (including those taking corticosteroids) or is in the second half of pregnancy.

Appropriate treatment should be decided in consultation with a multidisciplinary team; including an obstetrician/fetal medicine specialist, microbiologist and a neonatologist.

Women who require hospital admission should be nursed in isolation by health professionals with a known immunity to varicella. In all cases contact should be made with infection control.

The neonatal team should be informed of the birth of all babies born to women who have developed chickenpox at any gestation in pregnancy.

5.1 Chickenpox <28+0

- The risk of spontaneous miscarriage does not appear to be increased if chickenpox occurs in the first trimester.
- Small (<1%) risk of FVS.
- FVS is characterised by one or more of the following: skin scarring in a dermatomal distribution, eye defects such as micropthalmia or cataracts, limb hypoplasia and neurological abnormalities such as microcephaly.
- Refer to a fetal medicine specialist at 16-20/40 or 5 weeks after infection for discussion and detailed ultrasound examinations

5.2 Chickenpox >28+0

- No risk of FVS.
- If maternal chickenpox develops < one week before to one week after delivery there is a risk of neonatal disseminated infection. VZIG should be given to the child as soon as the exposure is identified and IV aciclovir used if the neonate develops a clinically apparent infection (see Neonatal Intensive Care Guideline *Varicella Zoster exposure in Neonates*)
- In general, delay planned delivery for at least one week after maternal rash onset to allow passive immunoglobulin transfer to the baby.

5.3 Postnatal chicken pox

- Women with chicken pox should breastfeed if they wish to and are well enough to do so.

6. Shingles (Herpes Zoster)

If the mother develops shingles in pregnancy then it is rare for the baby to acquire the infection.
However, high risk neonates may require VZIG if exposed:

- gestation<32/40
- birth weight <1,000g
- repeated blood sampling
- transfusion required

Neonatal VZV IgG should be tested if such children have a significant exposure.

Maternal shingles is usually clinically unambiguous, serological testing is rarely useful. If the diagnosis is in doubt, submit a viral swab for VZV PCR to the laboratory.

Maternal shingles is usually self-limiting and complications such as neuralgia are rare. Treatment with aciclovir is usually not indicated unless started within 72 hours of rash onset and any of the following:

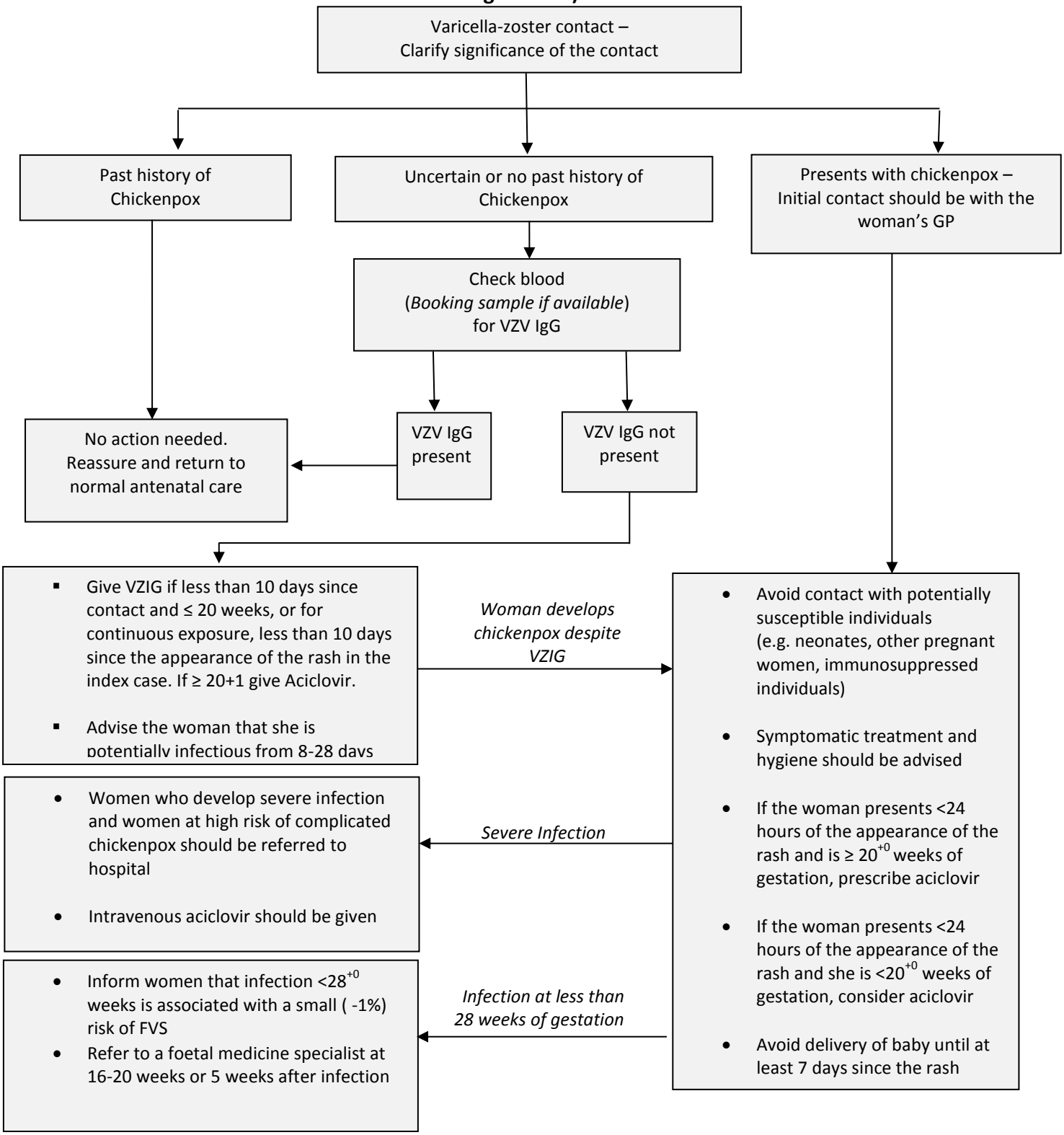
- Moderate or severe pain
- Moderate or severe rash
- Non-truncal involvement.

Further developed rash and neurological complications after >72 hours should warrant in-patient assessment and consideration of aciclovir treatment.

7. Record keeping

It is expected that every episode of care be recorded clearly, in chronological order and as contemporaneously as possible by all healthcare professionals as per Hospital Trust Policy. This is in keeping with standards set by professional colleges, i.e. NMC and RCOG.
All entries must have the **date and time** together with **signature and printed name.**

Management of varicella-zoster contact in pregnancy (adapted from RCOG Green Top guideline)



Abbreviations: FVS fetal varicella syndrome; GP general practitioner; IgG immunoglobulin G; VZIG varicella-zoster immunoglobulin; VZV varicella-zoster virus

Training requirements

Audit of training needs compliance – please refer to TNA policy

Training needs analysis:
Please refer to 'Training Needs Analysis' guideline together with training attendance database for all staff

Cross references

Guidelines can now be found on the network share (drive) 'G:\DocumentLibrary\UHPT Clinical Guidelines\Maternity'.

Maternity Hand Held Notes, Hospital Records and Record Keeping

References

Royal College of Obstetricians and Gynaecologist. Chickenpox in Pregnancy. Green-top Guideline No 13: Chickenpox in Pregnancy. January 2015.

Public Health England. Updated restrictions on use of Varicella Zoster Immunoglobulin (VZIG) during supply shortage. August 2018.

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