

Genital Infections in Pregnancy

What's New:

References updates to newest versions of guidelines

Trichomonas Vaginalis – all symptomatic patients should be treated.

Herpes: Current guidance is being updated please discuss any pregnant people with herpes with the Doctor of the Day

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Introduction

This guideline is designed to:

- highlight the impact of common STIs on the pregnant woman and her child who may be exposed either in utero or during delivery
- Highlight any management recommendations which may be different in pregnancy
- This guideline should be used in conjunction with the guideline specific to the infection in question

It is beyond the remit of this guideline to advise on the management of HIV and hepatitis B during pregnancy.

Group B Streptococcus (GBS) is recognised as an important cause of severe early onset infection in new-borns. GBS is not a sexually transmitted infection but is present in the vagina of approximately 50% of all pregnant women. Therefore, guidance is included to assist with the management of pregnant women in whom GBS is considered to be an incidental finding.

General Points

- Discuss the advantages of details regarding diagnosis of an STI being included within maternity records and (where permission is granted) inform the obstetric team.
- The physiology of pregnancy can alter the natural history of an STI
- It is safe to perform vaginal examination and take cervical swabs in the pregnant woman.
- Doxycycline and quinolones (e.g. ciprofloxacin/moxifloxacin) and treatment with Podophyllotoxin or Imiquimod preparations should not be used if there is a risk of pregnancy or on consultant/pharmacist advice.
- Partner notification is essential to reduce the possibility of re-infection
- Do not assume every pregnant woman has had HIV / syphilis testing as part of antenatal testing. She may have opted out of testing or not yet had her booking bloods. Even if she has been tested earlier in the pregnancy, women presenting with STIs should be offered repeat testing for HIV/Syphilis
- Patients planning a pregnancy should be encouraged to be tested for HIV/syphilis.
- The finding of GBS in the vagina or urine of a woman who is pregnant is significant and this information needs to be shared with her obstetric team.

Bacterial Vaginosis

Bacterial vaginosis (BV) may increase risk of late miscarriage, preterm birth, premature rupture of membranes and post-partum endometritis.

- There is no evidence to support screening asymptomatic pregnant women, for BV.
- Symptomatic pregnant women should be treated in the usual way; First line should be metronidazole 400mg oral twice daily 5-7days. The manufacturer recommends avoiding metronidazole 2g stat oral dose in pregnancy.

Metronidazole 400mg BD PO 5- 7days

- No teratogenic or mutagenic effects in infants have been found with metronidazole.
- Women with asymptomatic BV in pregnancy should be discussed with the obstetrician as the evidence related to treating BV to prevent adverse pregnancy outcomes is conflicting.

Chlamydia

- Studies show an association between Chlamydia Trachomatis (CT) and miscarriage, preterm birth and low birth weight. They also suggest an increased risk of complications the earlier in the pregnancy the infection occurs.
- Infants born vaginally to mothers with untreated genital CT infection are at risk for developing CT conjunctivitis (15- 50%) and/or pneumonia (5-30 %).
- Up to 1/3 of woman with CT delivering vaginally will develop puerperal infection.
- Azithromycin use in pregnancy remains off label but its use is generally recommended for uncomplicated genital, rectal & pharyngeal infection.

Oral Azithromycin 1g immediately then 500mg once on days 2 and 3.
If Azithromycin contraindicated use Erythromycin 500mg twice daily for 14 days
OR Erythromycin 500mg four times daily for 7 days OR Amoxicillin 500mg three times daily for 7 days

- A BASHH statement from 2017 raised concerns that some antibiotics (including Azithromycin) may be associated with an increased risk of

spontaneous abortion when used in pregnancy. However, as Azithromycin is more effective and better tolerated than other antibiotics used to treat CT, the Clinical Effectiveness Group sees no reason to change guidance at this time. The potential risks and benefits should be discussed with the patient and documented in clinical notes.

- A follow-up [BASHH statement from 2024](#) advises that first trimester use may be considered if there are no other options.
- Doxycycline should not be used in pregnancy unless on consultant/pharmacist advice.
- A test of cure should be performed a minimum of 3 weeks after treatment. This is essential in rectal infection.
- A repeat test at 36 weeks gestation is recommended.
- Partner notification should be undertaken.

Genital Warts

- Genital warts often present during pregnancy.
- C-section is rarely indicated, and this tends to be due to obstruction– vaginal outlet/cervix. The lesions may avulse or haemorrhage, or cause shoulder dystocia during delivery. It is not indicated to prevent vertical transmission.
- A serious potential complication to the infant is recurrent respiratory papillomatosis (warts on larynx). This occurs very rarely in about 4/100,000 births.
- Treatment may not always be required, but aims to reduce the amount of lesions present at delivery and, therefore, neonatal exposure to the virus.
- Do not use Podophyllotoxin, Imiquimod or Catephen in pregnancy.
- Cryotherapy can be offered but this may not be effective.
- Warts often spontaneously resolve in the weeks following delivery.

Consider Cryotherapy

Gonorrhoea

- Gonorrhoea has been shown to be associated with preterm rupture of membranes, pre-term birth, low birth weight and post-partum infection. There may be a greater rate of complications the earlier in pregnancy the infection occurs.
- Newborns may acquire gonococcal infection during delivery. The perinatal transmission rate is about 30 to 40 % in women with cervical infection. Intrauterine infection can also occur after rupture of the membranes.

- In the new born, the eye is the most frequent site of gonococcal infection. It is typically characterized by a purulent discharge. Without treatment, the infection can extend leading to ulceration, scarring, and visual impairment.
- Other localised gonococcal infections include infections of other mucosal surfaces (pharynx, vagina, urethra, and anus) and scalp abscess.
- In new-borns, systemic gonococcal infection (e.g. septic arthritis, sepsis, and/or meningitis) is rare and is usually a complication of localised infection.
- Cefixime and ceftriaxone are not thought to be harmful in pregnancy

Ceftriaxone 1g IM STAT

or

If true penicillin allergy: *Spectinomycin 2mg IM STAT*

Spectinomycin may be subject to supply issues. Consult Senior before use.

- Do not use quinolones e.g. ciprofloxacin in pregnancy.
- For penicillin allergic clients, consult senior colleague for advice.
- If unable/refused IM injection then consult BASHH guidelines and discuss with a senior. Azithromycin 2g STAT can be considered in these cases but only when the isolate is known to be susceptible to Azithromycin and the manufacturer recommends this only when no other alternatives are available.
- Test of cure should be offered 3 weeks after treatment.
- A repeat test at 36 weeks gestation is recommended to exclude re-infection.
- Partner notification should be undertaken.

For bacterial pharyngeal infections please discuss with GUM Doc of the day

Herpes Simplex

Current guidance is being updated please discuss any pregnant people with herpes with the Doctor of the Day

Syphilis

Syphilis in pregnancy should be managed as clinically urgent by a multidisciplinary team including GUM, Obstetrics, Paediatrics and General Practice.

Screening

- All pregnant women are offered serological screening for syphilis at their initial antenatal appointment. This should be repeated if the woman is at risk of infection.
- *Treponema pallidum* can be transmitted transplacentally at any stage of pregnancy; the risk is dependent on the stage of maternal infection and duration of fetal exposure.
- Syphilis can cause polyhydramnios, miscarriage, pre-term labour, stillbirth, hydrops and congenital syphilis.
- Maternal co-infection with HIV may increase the transmission risk of syphilis.

Management

- See Appendix 1 for how positive results in pregnancy should be handled.
- GU Physicians should make a clear diagnosis and communicate this clearly in a birth plan (Appendix 2).

The outcome could be:

- a. Maternal treatment not indicated
 - Biological false positive test
 - Syphilis adequately treated before this pregnancy
 - b. Maternal treatment indicated
 - Active syphilis of any stage
 - Unclear history of syphilis treated prior to this pregnancy
- When women have been cured of syphilis prior to pregnancy, their RPR should be checked at booking and then repeated at 28 weeks gestation.

If re-infection is excluded, the woman requires no further treatment and the neonate will not require testing.

- Re-treatment in pregnancy is indicated where there is uncertainty of treatment or serologic cure is in doubt.
- Partner notification is essential to reduce the possibility of re-infection.

Treatment

- A single dose of benzathine penicillin G 2.4 MU is effective in most cases. Local Sandyford practice is to treat with 2 doses.

Benzathine Penicillin G 2.4 MU Intramuscular on Day 1 & 8

See syphilis guidelines for administration

- Those with penicillin allergy: It is no longer recommended to use Macrolide antibiotics (Azithromycin or Erythromycin) to treat syphilis in pregnancy due to unacceptably high failure rates. Instead a thorough history should be ascertained of the possible allergy and discussed with a GUM senior. If a history of true allergic reaction exists then an urgent referral should be made to local immunology/allergy services for consideration of de-sensitisation.
- In pregnancy the rate of the Jarisch-Herxheimer reaction is the same as in the non-pregnant, circa 40%. This may cause uterine contractions and fetal heart decelerations, as a result of maternal fever. Therefore, there may be a theoretical increased risk of spontaneous and iatrogenic preterm delivery and fetal demise. However, these complications are also associated with Syphilis infection. Management should be supportive with antipyretics. Steroids are not effective in reducing these effects.
- If delivery occurs within 30 days after completion of therapy the neonate will require empirical treatment. This also applies in a suspected case of congenital syphilis, those born to mothers with non -penicillin treatment regimens and those born to mothers without documented evidence of adequate treatment.
- Partner Notification should be undertaken to prevent re-infection.

Follow Up

- It may take several months to observe a four-fold drop in RPR/VDRL titre and in many pregnancies labour will occur before these periods have elapsed.
- Moreover, women with late syphilis may have serofast RPR/VDRL titres. Hence, serological cure may not be demonstrable before birth of the neonate.

Trichomonas Vaginalis

- *Trichomonas vaginalis* (TV) has been associated with premature rupture of membranes, preterm delivery, and low birth weight. TV infection at delivery may predispose to maternal postpartum sepsis
- There is no evidence to support asymptomatic screening for TV.
- Symptomatic pregnant women should be treated at diagnosis, regardless of the stage of the pregnancy. If symptoms do not resolve a test of cure is indicated.
- When a patient is asymptomatic some clinicians may recommend deferring therapy until after 37 weeks' gestation. Senior clinicians should counsel patients regarding the potential risks and benefits of treatment and communicate the option of therapy deferral in asymptomatic pregnant women until after 37 weeks' gestation.
- Metronidazole can be used in all stages of pregnancy and during breast feeding. 400 mg oral metronidazole twice daily for 7 days is used in preference to short high-dose regimens which are not recommended during pregnancy.

Metronidazole 400mg bd PO 7 days

- No teratogenic or mutagenic effects in infants have been found with metronidazole. Metronidazole enters breast milk and may affect its taste. The manufacturers recommend avoiding high doses if breastfeeding.
- Partner notification should be undertaken to prevent re-infection.

Vulvovaginal Candidiasis

- Vulvovaginal candidiasis (VVC) does not require treatment in pregnancy if the person is asymptomatic as there is no evidence of any adverse effect on pregnancy.
- Topical imidazoles (e.g. clotrimazole) have been found to be effective in pregnant women with VVC but a longer treatment regimen may be required.

Clotrimazole 500mg vaginal pessary at night
for up to 7 nights

- Oral antifungals should be avoided during pregnancy (congenital abnormalities reported with high doses)

Group B Streptococcal (GBS) Colonisation

- About 50% of all pregnant woman in the UK carry GBS in their vagina.
- GBS can be passed from mother to baby. When this happens it can occasionally cause severe illness in the new-born (known as neonatal GBS).
- Only 1 in every 2000 new-born babies born in the UK and Ireland is diagnosed with neonatal GBS.
- Women in whom GBS has been found in the urine or swabs from the vagina (or rectum) taken for other reasons are likely to be offered antibiotics during labour. It is important that the pregnant women and their midwifery or obstetric team are made aware of the presence of colonisation.
- Women with GBS in the vagina do not need antibiotics in pregnancy prior to labour unless they have a symptomatic infection (for example a urine infection).
- Women with GBS urinary tract infection during pregnancy should receive antibiotics at the time of diagnosis (on discussion with the women's obstetric team) as well as during labour.
- Antenatal prophylaxis for vaginal / rectal colonisation detected incidentally earlier in a pregnancy does not reduce the likelihood of colonisation at the time of delivery so is not recommended.
- There is no national screening programme for GBS in the UK as there is no clear evidence to show that screening all pregnant women in the UK would be beneficial overall.
- Vaginal swabs should not be taken in pregnancy unless there is a clinical indication to do so.
- The RCOG have written a patient information leaflet for women who are expecting a baby or planning to become pregnant about Group B Streptococcus infection which is available at:

<https://www.rcog.org.uk/media/xtmfktbh/pi-gbs-pregnancy-newbornnewlogo21.pdf>

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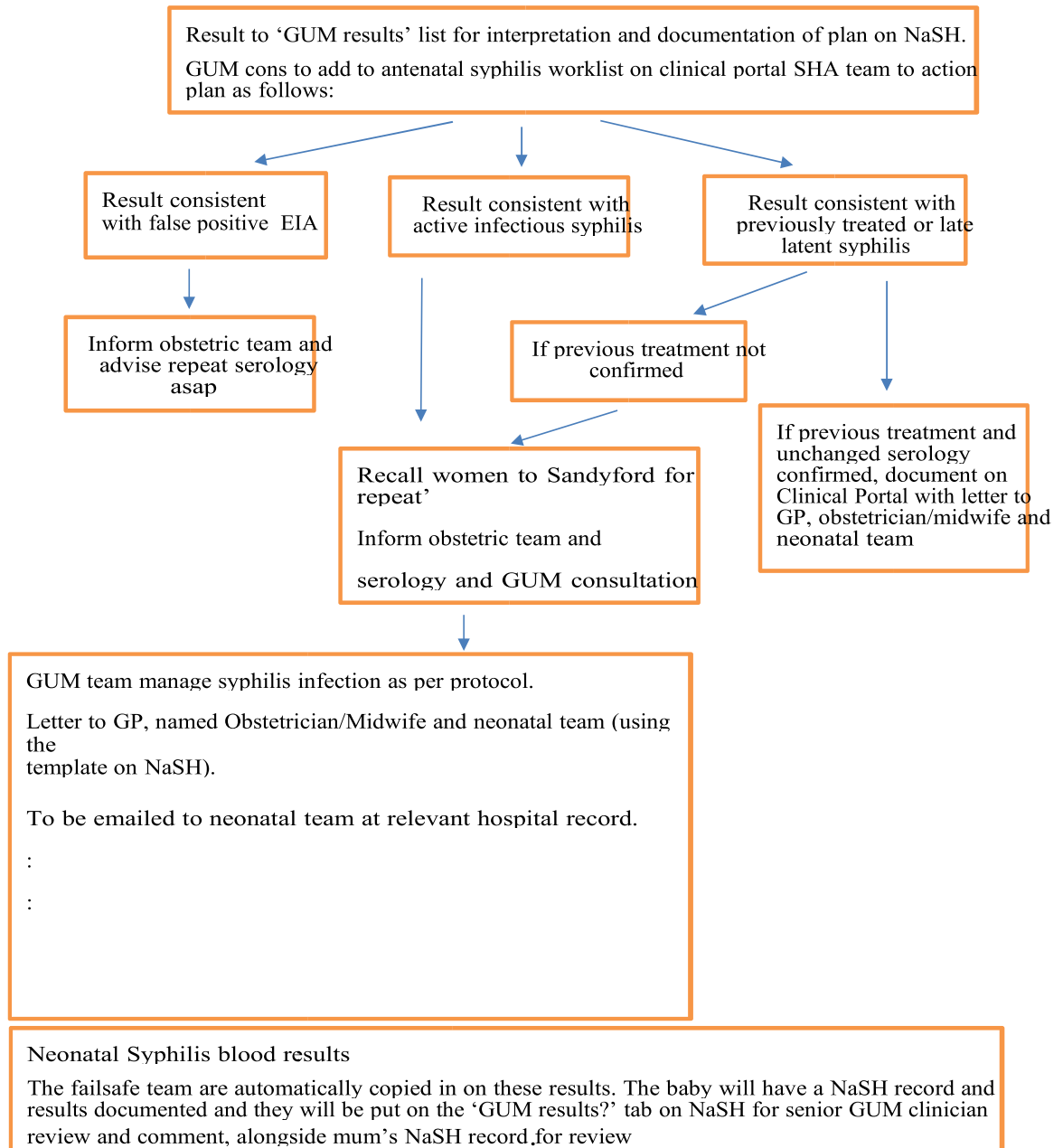
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Appendix 1

Antenatal Syphilis Management

Lab report EIA positive antenatal sample to Sandyford Shared Care team



Appendix 2

Letter to GP, Obstetrics & Neonatal team re: Antenatal Syphilis Diagnosis & Management - And to be uploaded to mum & baby's Badgernet and clinical portal records

Name: _____ CHI: _____ Date:

Date of syphilis diagnosis: _____ Pregnancy EDD:

Stage of syphilis diagnosed in pregnancy

Additional Information

HIV and other BBV status

Treatment details

Date treatment completed/due to complete _____

Syphilis serology results (date _____)	
EIA	

TPPA	
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IgM	
RPR	

*Please note further serological follow up will be completed by Sandyford
GUM ADVICE TO PAEDIATRICIANS (tick as required)

See West of Scotland congenital syphilis guideline:

Please discuss infant blood test results with GUM (or Paediatric infectious diseases team if OOH or suspicion of neonatal infection).

Infant requires no physical examination above routine. No syphilis serology required	
Assess infant clinically: if no physical signs of syphilis, perform syphilis serology on infant serum (not cord blood) for EIA IgM and RPR. N.B. If physical signs are present consider additional investigations. Refer to West of Scotland Syphilis guideline and discuss with GUM or ID consultant	
Treat infant at birth with _____ after clinical assessment, perform syphilis serology on infant serum (not cord blood) for EIA IgM and RPR and additional tests as per guideline	

Follow Up

Infants who have serology tests at birth require follow up as per the three pathways detailed in the WoS guideline. Tick the appropriate follow-up pathway below once the infant's serology is known.

Baby Name _____ CHI _____

Age	Infants treated for congenital syphilis at birth	Infant not treated for syphilis and RPR <4x mother's and IgM negative at birth	Infant not treated for syphilis and RPR and IgM negative at birth
Select Follow up pathway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 month	RPR TP Syphilis IgM		
3 months	RPR TP Syphilis IgM	RPR TP Syphilis IgM	RPR TP Syphilis IgM If negative: discharge If positive: Repeat at 6 months
6 months	RPR	RPR If negative: discharge If positive: repeat at 12 months	RPR If negative: discharge If positive: discuss with GUM team.

<p>12 months</p>	<p>RPR</p> <p>Discharge if RPR has achieved sustained 4x drop from peak level.</p> <p>If RPR remains higher, discuss with GUM team.</p>	<p>RPR</p> <p>If negative: discharge</p> <p>If positive: discuss with GUM team.</p>	
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For further information please contact Sandyford on 0141 211 8634.

Yours sincerely,

Signature: _____

Consultant in Genitourinary Medicine

Signature: _____

Consultant Neonatologist