NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

HCG tracking for Pregnancy of Unknown Location (PUL)

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Does this version include changes to clinical advice:	No
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Approval Group:	Gynaecology Clinical Governance Group

Important Note:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

GG&C Early Pregnancy Guidelines

HCG tracking for pregnancy of unknown location (PUL)

Objective

This protocol is designed for use within the Early Pregnancy Assessment Service. The objective is to create safe management for women presenting with a positive pregnancy test and no evidence of intrauterine pregnancy (IUP)
It explains

- When to perform ultrasound
- How to interpret results

Pregnancy of unknown location

- PUL is used to describe cases where there is a positive pregnancy test but no sign of a pregnancy inside or outside the uterus.
- PUL could be an ectopic pregnancy until location determined.
- Serum levels of HCG are used to help determine management of the pregnancy.
- In normal pregnancy, serum HCG levels increase by 63% every 48 hours.
- Around 70 % of women with an ectopic pregnancy will have a rise in HCG that is slower than normal for a normal pregnancy or a fall that is lower than normal for a spontaneous miscarriage but 13% of ectopic of pregnancies will have a normal doubling time.
- 15 % of patients with a normal pregnancy will have an abnormal doubling time – which can make it difficult to differentiate between a normal pregnancy, a miscarriage and an ectopic pregnancy.
- The discriminatory zone is a serum level that corresponds to the threshold above which an intrauterine gestational sac should be detectable by ultrasound. A discriminatory level of 1500 iu/I has been agreed.
- In multiple pregnancies, the HCG level will be slightly higher, requiring an extra 2-3 days for a sac to become visible.
- Women with presumed complete miscarriage should be treated as PUL and have HCG tracking.
- Place more importance on the clinical symptoms than on serum HCG levels and review the woman's condition if any of her symptoms change – an ectopic pregnancy can rupture with a HCG $\leq$ 1000 iu/l.

- The patient should be given written information about what to do if they experience any new or worsening symptoms including details about how to access emergency care 24 hours per day.

Outcome of PUL

1. Disappearance of pregnancy- miscarriage or resolved ectopic.
2. Progression to confirmation of normal intrauterine pregnancy.
3. Ectopic pregnancy
4. Persistent PUL (2%)

Scanning recommendations

1. A transabdominal scan should be performed in the first instance to exclude pelvic pathology
2. Where trans-abdominal scan has failed to confirm an intra uterine pregnancy, a transvaginal scan should be performed.
3. When the location of the pregnancy is not confirmed on transvaginal scan HCG tracking should be commenced.
4. If an intrauterine sac with yolk sac is demonstrated, HCG tracking is not required.

Initial HCG ≥ 1500 iu/l and the clinical history is not strongly suggestive of complete miscarriage:

1. Repeat Transvaginal scan within 24-48 hours by an experienced sonographer.
2. If no evidence of intrauterine pregnancy and a co-existing adnexal mass consistent with an ectopic pregnancy then option of medical (Methotrexate) or surgical (diagnostic laparoscopy +/- salpingectomy) management.
3. If no evidence of an intrauterine pregnancy with no evidence of an adnexal mass consistent with an ectopic pregnancy i.e. PUL, review and rescan by an experienced sonographer +/- HCG tracking if clinically well.

Initial HCG ≥ 25 and < 1500 iu/l

1. Review clinical condition and ultrasound findings.
2. If clinically well, repeat HCG after 48 hours and manage as an outpatient.
3. Review immediately if new or worsening symptoms.

Initial HCG < 25 iu/l

1. Discharge with appropriate advice if asymptomatic.
2. Review if persistent symptoms with a positive pregnancy test.

Appropriate increase of 63% but HCG <1500 iu/l

1. Continue HCG tracking if clinical condition permits – likely to have a developing intrauterine pregnancy however ectopic pregnancy not yet excluded.
2. Repeat transvaginal scan in 7 days to confirm location of pregnancy.
3. If viable pregnancy then confirmed, refer for routine ante natal care.
4. If viable intrauterine pregnancy not confirmed, check HCG and immediate review by senior gynaecologist.

Inappropriate increase of less than 63% or inappropriate decrease of less than 50%

1. review clinical condition and ultrasound findings
2. If clinically well, repeat HCG after 48 hours.
3. Repeat transvaginal scan after third HCG by an experienced sonographer- exclude markers for ectopic pregnancy- i.e. adnexal mass, free intraperitoneal fluid.
4. Management dictated by ultrasound findings and clinical condition.
5. Consider active management following third HCG measurement where there has been suboptimal increase/ decrease or a plateauing or fluctuating pattern.

Appropriate decrease by at least 50%

1. Review clinical condition and ultrasound findings. Differential diagnosis is complete miscarriage or resolving PUL.
2. If clinically well, continue HCG tracking at 48 hour intervals on one further occasion.
3. If satisfactory decrease over this period, monitor HCG levels weekly until HCG $\leq$ 25 iu/l.
4. Discharge if asymptomatic.

All patients require a senior medical review after 3rd HCG result
All patients should have written information on PUL and advice to contact EPAS if increasing pain, bleeding or any concerns.

References

1. RCOG/AEPU- Greentop Guideline: Diagnosis and Management of Ectopic Pregnancy . Guideline No.21. Nov 2016 www.rcog.org.uk
2. NICE Guideline: Ectopic pregnancy and miscarriage: Diagnosis and initial management in early pregnancy of ectopic pregnancy and miscarriage. Dec 2012. www.nice.org.uk/guidance

Resources

1. NHS Choices. www.nhs.uk/conditions/Ectopic-pregnancy
2. The Ectopic Pregnancy Trust. www.ectopic.org.uk/patients

Keywords

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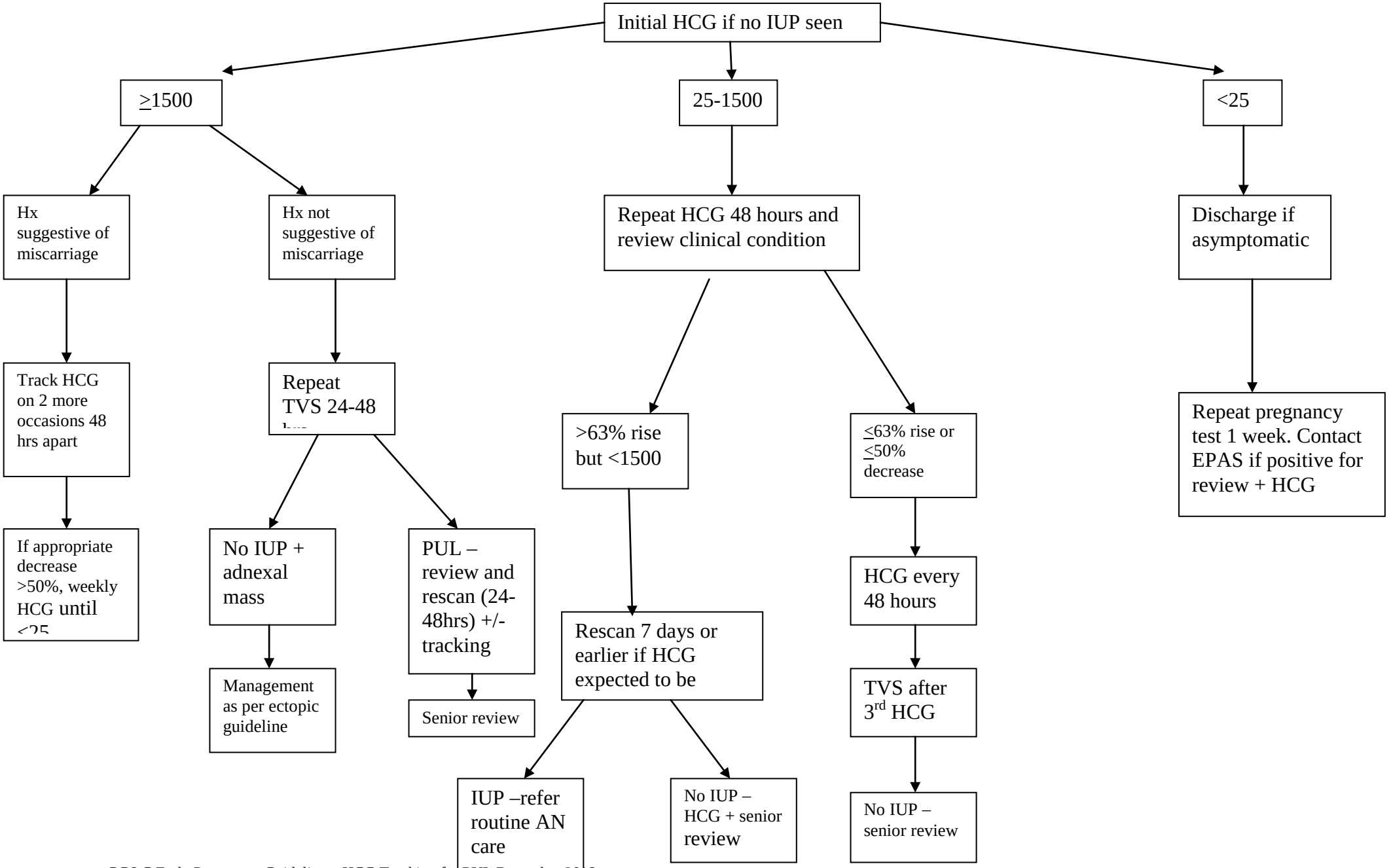

All patients should have a senior review after 3rd HCG.
All patients advised to contact if worsening pain, bleeding or any concerns.