Brighton and Sussex University Hospitals NHS Trust

# Management of Pregnancy of Unknown Location (PUL)

Maternity Protocol: GP001

Date agreed: January 2017

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| **Guideline Reviewer:** | Tasneem Singhal |
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**Contents:**

# Key Principles:

These guidelines and algorithms are aimed to assist in decision making. They are not designed to be prescriptive and you are not expected to use them in exclusion of discussions with senior colleagues.

Evidence used to inform these guidelines had been drawn from national/RCOG guidelines. Where applicable other references are quoted.

These guidelines have been reviewed by all clinicians involved in early pregnancy care, including consultants, trainees and specialist and senior nursing staff.

A protocol is a set of measurable, objective standards to determine a course of action. Professional judgement may be used in the application of a protocol.

# Scope:

These guidelines apply to women who have a diagnosis of Pregnancy of Unknown location.

# Responsibilities:

Nurses, Midwives & Gynaecologists & Obstetricians:

- To access, read, understand and follow this guidance
- To use their professional judgement in application of this guidance

Management Team

- To ensure the protocol is reviewed as required in line with Trust and
- National recommendations
- To ensure the protocol is accessible to all relevant staff
- To ensure protocols are available to service users on request

# 1. Introduction

A descriptive term used to classify a pregnancy when a woman has a positive pregnancy test but no pregnancy can be seen on an ultrasound scan.

Most PULs are either early intrauterine pregnancies or miscarriages that are too early to be seen on ultrasound scan.

The objective of subsequent management of this pregnancy is to ensure that if possible the location of the pregnancy is found, especially in a growing pregnancy and in a failing pregnancy and that the pregnancy resolves without complications for the woman.

**IMPORTANT**

- **If a woman comes in with bleeding PV**
- **with or without abdominal pain**
- **and then has an ultrasound scan, which shows no intrauterine pregnancy ,**
- **In the absence of a previous scan in this pregnancy which has seen an intrauterine pregnancy**
- **A diagnosis of a miscarriage CANNOT be made. This is to be treated as a PUL.**

# 2. Principles of Management

2.1. Women with a PUL could have an ectopic pregnancy until the location is determined.

2.2. Do a FBC, Group and Save, HCG and a single S.Progesterone Level.

2.3. If the S.Progesterone is <10nmol/L and the initial HCG is 1000mmol or less and the women is completely asymptomatic she can be managed conservatively. Advise her to repeat a pregnancy test in 2 weeks. Give safe-Netting advice.

2.4. If the S.Progesterone is less than 10nmol/L, but the initial HCG is 1000iu/L or more and the women is completely asymptomatic repeat the HCG after 48 hours. If this is decreasing and she is completely asmptomatic repeat then manage conservatively with Safety-netting advice. If the HCG is increasing treat like PUL and offer rescan as appropriate as per protocol.

2.5. Serum hCG measurements do NOT determine the location of the pregnancy.

2.6. Place more importance on the clinical symptoms than on serum hCG results, and review the women's condition if any of her symptoms change, regardless of previous results and assessments.

2.7. Use serum hCG measurements only for assessing trophoblastic proliferation to help to determine subsequent management.

2.8. Take 2 serum hCG measurements as near as possible to 48hours apart (but not earlier) to determine subsequent management of the pregnancy of unknown location. Take further measurements only after review by a senior healthcare professional.

2.9. Regardless of serum hCG levels, give women with a PUL written information about what to do if they experience any new or worsening symptoms, including details about how to access emergency care 24 hours a day.

2.10. Advise women to return if there are new symptoms or if symptoms worsen.

# 3. Increase In serum hCG

For a woman with an increase in serum hCG concentration greater than 63% after 24hours:

3.1. Inform her that she is likely to have a growing pregnancy

3.2. Offer transvaginal ultrasound scan to determine the location of the pregnancy when the serum hCG level is ≥ 1500IU/Litre.

3.3. If a viable intrauterine pregnancy is confirmed, offer her routine antenatal care[4]

3.4. If an intrauterine pregnancy is not confirmed, manage based on clinical symptoms.

# 4. Decrease in serum hCG

For a woman with a decrease in hCG concentration >50% after 48 hours:

4.1. In form her that the pregnancy is unlikely to continue (failing pregnancy)

4.2. Provide her with verbal and written information

4.3. Follow up with weekly hCG tests until level is <20IU/L or she has a negative pregnancy test (referral explination in notes below).

4.4. She can then do a pregnancy test after 2 weeks, if the test is negative, no further action is necessary

4.5. If the test is positive, she should return to the EPU for clinical review within 24hours.

# 5. Serum hCG between 50% decline and 53% rise

For a women with a change in serum hCG concentration between a 50% decline and 63% rise inclusive or clinical symptoms of pain, refer her for clinical review in EPU

# 6. Further management

Further management will be individualised depending on clinical signs and symptoms

6.1. Further scans may be indicated to look for the ectopic pregnancy or rule out haemoperitoneum.

6.2. Laparoscopy may be indicated in a symptomatic woman.

6.3. Do not treat PUL with methotrexate.

# 7. All PUL women

7.1. Advise them to come into A&E if they have severe pain or feel unwell.

7.2. Explain the current suspected diagnosis.

7.3. Advise them not to travel to places where immediate medical care may not be available

# Notes for all EPU nurses

There are 3 conditions in which we follow up women with weekly HCGs.

1- Women with PULs
2- Women with expectant management of Ectopic
3- Women with medical management of Ectopics.

There has been some confusion with regards to their follow up mainly because of how the original guidelines were written. Some state FU until HCG of 20iu/L , while some say 15iu/L some say 5iu/L and some say until UPT is negative.

For practical purposes ALL of the original papers on which these guidelines are based follow up women upto a Negative pregnancy test.

For this reason and to reduce the number of unnecessary blood tests and visits to EPU, this is what I have suggested.

If in any of the above 3 conditions where a woman's HCG has been DECREASING over the weeks and we obtain an HCG result which is less than 50iu/L -but more than 15iu/L … instead of asking for a further blood test in a week – we will ask the woman to do a pregnancy test at home in a week and we will ring her for the results.

If the UPT is negative – that is the end of the follow up

If the UPT is positive, we will offer a further blood test.

So ALL our women will be followed up to a HCG less than 15iu/L or a NEGATIVE pregnancy test.

The most important aspect of the follow up is the ***safety netting***. – This is because we know that a woman can need an emergency surgery for a bleeding ectopic even with a decreasing HCG or even after a negative pregnancy test.

And the HCG levels are being done for a trend view only.

# References

1. National Institute for Health and Clinical Excellence (2012) *Ectopic pregnancy and miscarriage: diagnosis and initial management*. Clinical guideline 154. London. NICE.
2. Royal College of Obstetricians and Gynaecologists (2010) *The management of tubal pregnancy*. Clinical guideline 21. London. RCOGT (archived)
3. Diagnosis and Management of Ectopic Pregnancy. Green-top Guideline No. 21 RCOG/AEPU Joint Guideline | November 2016