PLACENTA PRAEVIA/LOW-LYING PLACENTA

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- Diagnosis and clinical management of woman with low-lying placenta (LLP) or placenta praevia (PP)

2. PATIENT

- Pregnant woman with a LLP/PP after 20 weeks gestation

3. STAFF

- Medical and midwifery staff

4. EQUIPMENT

- Ultrasound
- 16-gauge intravenous (IV) cannula
- Blood tubes

5. CLINICAL PRACTICE

Screening:

- Recommend a morphology ultrasound at 18-20 weeks gestation to ascertain placental location
- Include, on the ultrasound request form, any history of uterine surgery e.g. previous caesarean section (CS), myomectomy, to ensure that features of placenta accreta are examined
- Identify woman with a:
  - LLP i.e. within 2cm of, but not covering the internal cervical os
  - PP i.e. covering the internal cervical os

Antenatal care:

- Reassure woman that 9 out of 10 LLP found at 18-20 week morphology ultrasound are no longer low-lying by term[1]
- Reassure woman with LLP that if she remains asymptomatic, there is no increased risk of adverse outcomes in the mid-trimester and she can continue normal activities e.g. travel, intercourse, exercise[2]
- Advise woman with LLP from 36 weeks that it is not a contraindication for trial of labour, chance of vaginal birth approximately[9]:
  - 43% if placenta is 0-10mm from cervical os
  - 85% if placenta is ≥ 11-20mm from cervical os
- Arrange consultation with obstetric team for discussion of PP after 20 weeks gestation
- Advise woman with PP found at morphology ultrasound, chance of vaginal birth approximately[3]:
  - 79% if placenta reaches internal cervical os
  - 43% if placenta overlaps internal cervical os 0-25mm
  - 0% if placenta overlaps internal os > 25mm
- Advise woman with known PP to contact delivery suite (DS) or present immediately to her nearest DS for assessment if antepartum haemorrhage (APH) or any signs of labour occur[4]:
  - Admission will usually be required and managed as per antepartum haemorrhage (APH) LOP https://www.seslhd.health.nsw.gov.au/sites/default/files/documents/aph.pdf
  - Use tocolysis with caution, following discussion with obstetric consultant
  - Prescribe appropriate prophylaxis for venous thromboembolism for a woman with prolonged inpatient stay
  - Advice with regards to normal activities will need to be individualised for each woman

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- Repeat ultrasound for asymptomatic woman with either LLP or PP[5] and review result as per Appendix 1, if she has not had any other incidental ultrasounds in the interim which have already demonstrated the placenta is no longer low-lying
- Do not order ultrasound earlier than stated in Appendix 1 as it will frequently need to be repeated
- Inform the woman that transvaginal (TV) ultrasound is recommended for accuracy[4]
- Refer to obstetric ANC of usual model of care (MOC)at:
  - 35 weeks gestation if PP still present
  - 36-37 weeks gestation if LLP present

Obstetric ANC (35-37 weeks gestation):

- Counsel woman following the third trimester ultrasound, where LLP/PP remains, about the following:
  - the importance of optimising maternal haemoglobin (Hb) and iron stores. Order full blood count (FBC) and iron studies, if > 4 weeks since previous tests, and manage appropriately
  - increased risk of bleeding/haemorrhage/blood transfusion and admission to hospital
  - increased risk of preterm labour with APH and subsequent delivery, and management options
  - mode of delivery options appropriate to her circumstances
  - potential for major surgical interventions including hysterectomy
- Document plan and mode of birth after discussion with consultant obstetrician. This may involve a repeat ultrasound and further obstetric ANC visits before deciding mode of birth, particularly with LLP which may continue to resolve as gestation advances[1,6]
- Plan caesarean section at:
  - 37 weeks gestation for PP, in the absence of the indication for earlier delivery. Consider corticosteroid cover
  - 39 weeks gestation for persistent LLP
- Complete Recommendation for Admission (RFA) form and consent at this consultation

Pre-admission clinic (PAC):

<u>Obstetric Medical Officer</u>

- Ensure most recent ultrasound for LLP/PP is within 2-3 weeks of planned surgery, especially for LLP as these may continue to resolve as gestation advances.
- Order a further ultrasound if a change in diagnosis would affect mode of delivery or timing of elective CS. Refer the same day/morning to RHW Department of Medical Imaging for a TV ultrasound for placental location/position. Mark request form as 'AFI and Doppler' only (to avoid full third trimester ultrasound) and ask for placental location. Obtain result urgently to confirm delivery plan for woman before she leaves PAC
- Check recent FBC and iron studies/ferritin result, and manage appropriately
- Order pre-operative bloods, and give woman instructions to have blood collected (ideally) the day prior to surgery;
  - FBC and group and hold if posterior/lateral LLP
  - FBC and crossmatch 2 units packed cells if PP or anterior LLP and have blood available in theatre. This must be collected the day prior to surgery to allow Blood Bank time to appropriately crossmatch
- Ensure obstetric consultant who will be present at elective caesarean is aware of LLP/PP. This may involve contacting booking office to ascertain which obstetric consultant to contact.

<u>Anaesthetic Medical Officer</u>

- Ensure anaesthetic consultant who will be present at elective caesarean is aware of LLP/PP
- Discuss with anaesthetic consultant option of regional versus general anaesthesia and document plan/advice

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Delivery:

- Ensure pre-operative bloods have been taken and results are available prior to commencement of surgery
- Ensure cross-matched packed cells (if been ordered) are available in theatre prior to commencement of surgery
- Ensure obstetric consultant is present for all deliveries when an anterior LLP/PP is present or any suggestion of an accreta, including previous caesarean section
- Ensure obstetric consultant is present for all deliveries with an obstetric registrar who has NOT yet completed their FRANZCOG written and oral examination when a posterior LLP/PP is present

6. DOCUMENTATION

- Medical records

7. EDUCATIONAL NOTES

- Placenta praevia = placenta covering or encroaching upon the internal cervical os[4]
- Low-lying placenta = placenta within 2cm but not covering the internal cervical os[4]
- TV scan for the diagnosis of placenta praevia or a low-lying placenta is superior to transabdominal and transperineal approaches and is safe[4].
- Heller et all demonstrated 96% of LLP diagnosed in the second trimester will no longer be low by 36 weeks gestation, with a further 2.5% 'clearing' the cervix between 36-41 weeks gestation[1]
- Unless placental edge is at least reaching the internal os at the morphology ultrasound, placenta praevia at term is unlikely (0.5%) [1]
- Becker et al[3] found:
  - 28/42 placenta praevia at 20-23 weeks required caesarean delivery for persistent PP or APH
  - An overlap of ≥ 25 mm at 20-23 weeks seems to be incompatible with later vaginal delivery.
- Previous CS increases the risk of developing placenta praevia in subsequent pregnancies. The risk rises as the number of prior CS increase[4]
- Assisted reproductive technology and maternal smoking increase the risk of PP[4]
- There is an association between placenta praevia and intrauterine growth restriction among multiparous, but not nulliparous, women[7,8]
- If the distance between the internal os and the placental edge is 20 mm or more on TVS, the placental location should be recorded as normal and managed as per routine. Studies have not demonstrated an increased risk for caesarean section due to haemorrhage in these cases[4]

Antenatal care LLP:

- Women with a LLP diagnosed mid-pregnancy are at no higher risk of adverse outcomes than those with a normal located placenta, except for postpartum haemorrhage (7.6 vs 4.7 %) [2]
- In a woman with a third trimester asymptomatic low-lying placenta the mode of delivery should be based on the clinical background, the woman's preferences, and supplemented by ultrasound findings, including the distance between the placental edge and the fetal head position relative to the leading edge of the placenta on TV ultrasound[4]
- 0-20 mm away from the os is associated with a higher CS rate, although vaginal delivery is still possible depending on the clinical circumstances.[6]

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Antenatal care PP:

- For symptomatic women with recurrent bleeding, antenatal care, including hospitalisation, needs to be tailored to the individual woman's needs and social circumstances, e.g. distance between home and hospital and availability of transportation, previous bleeding episodes, haematology laboratory results, and acceptance of receiving donor blood or blood products.[4]
- Where hospital admission has been decided, an assessment of risk factors for venous thromboembolism in pregnancy should be performed. This will need to balance the risk of developing venous thromboembolism against the risk of bleeding from a placenta praevia. Prolonged inpatient care is associated with an increased risk of thromboembolism, gentle mobilisation and TEDs stockings are recommended in all hospitalised women.[4]
- Women with asymptomatic PP in the third trimester should be counselled about the risks of preterm delivery and obstetric haemorrhage, and their care should be tailored to their individual needs.[4]

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE GUIDELINES

- Anaemia and Haemoglobinopathies in Pregnancy
- Antepartum Haemorrhage (APH)
- Caesarean Birth – Maternal preparation and receiving the neonate(s)
- Corticosteroids - for women at risk of preterm birth or with a fetus at risk of respiratory distress – antenatal
- Next Birth after Caesarean Section (NBAC)
- Thromboembolism Prophylaxis and Treatment- http://www.cec.health.nsw.gov.au/keep-patients-safe/medication-safety-and-quality/vte-prevention/Pregnant-and-Post-Partum-Women
- Specialist Obstetrician – Conditions and Procedures Requiring Attendance
- Acute Care Centre (ACC) - Admission Criteria, Process, Management and Escalation
- Postpartum Haemorrhage (PPH) - Prevention and Management
- Blood Products - Management of pregnant woman unable to use blood products
- Critical Bleeding Protocol – POWH/RHW

9. RISK RATING

- Medium

10. NATIONAL STANDARD

- Standard 5 - Comprehensive Care

11. REFERENCES

1. Heller HT, Mullen KM, Gordon RW, Reiss RE, Benson CB. Outcomes of pregnancies with a low-lying placenta diagnosed on second-trimester sonography. J Ultrasound Med. 2014 Apr;33(4):691-6
2. Robinson AJ, Muller PR, Allan R, Ross R, Baghurst PA, Keirse MJ. Precise mid-trimester placenta localisation: does it predict adverse outcomes? Aust N Z J Obstet Gynaecol. 2012 Apr;52(2):156-60
3. Becker R, Vonk R, Mende B, et al. The relevance of placental location at 20-23 gestational weeks for prediction of placenta previa at delivery: evaluation of 8650 cases. J Perinat Med 2002; 30:388-342
4. RCOG. Placenta praevia and placenta accreta: Diagnosis and management. Green Top Guidelines No. 27a Sept 2018

PLACENTA PRAEVIA/LOW-LYING PLACENTA cont'd

5. Kapoor S, Thomas JT, Petersen SG, Gardener GJ. Is the third trimester repeat ultrasound scan for placental localisation needed if the placenta is low lying but clear of the os at the mid-trimester morphology scan? Aust N Z J Obstet Gynaecol. 2014 Oct;54(5):428-32.
6. Oppenheimer L; MATERNAL FETAL MEDICINE COMMITTEE. Diagnosis and management of placenta previa. J Obstet Gynaecol Can. 2007 Mar;29(3):261-266.
7. Ananth C, Smulian J, Vintzileos A. The effect of placenta previa on neonatal mortality: A population-based study in the United States, 1989 through 1997. Am J Obstet Gynecol 2003; 188:1299-1304
8. Räisänen S, Kancherla V, Kramer M, Gissler M, Heinonen S. Placenta Previa and the Risk of Delivering a Small-for-Gestational-Age Newborn. Obstetrics & Gynecology. 124(2):285–291, AUG 2014.
9. Jansen CHJR, de Mooji YM, Blomaard CM, Derks JB, van Leeuwen E, Limpens J, Schuit E, Mol BW, Pajkrt E. Vaginal delivery in women with a low-lying placenta: a systematic review and meta-analysis. BJOG 2019 Aug;126(9):1118-1126

REVISION & APPROVAL HISTORY
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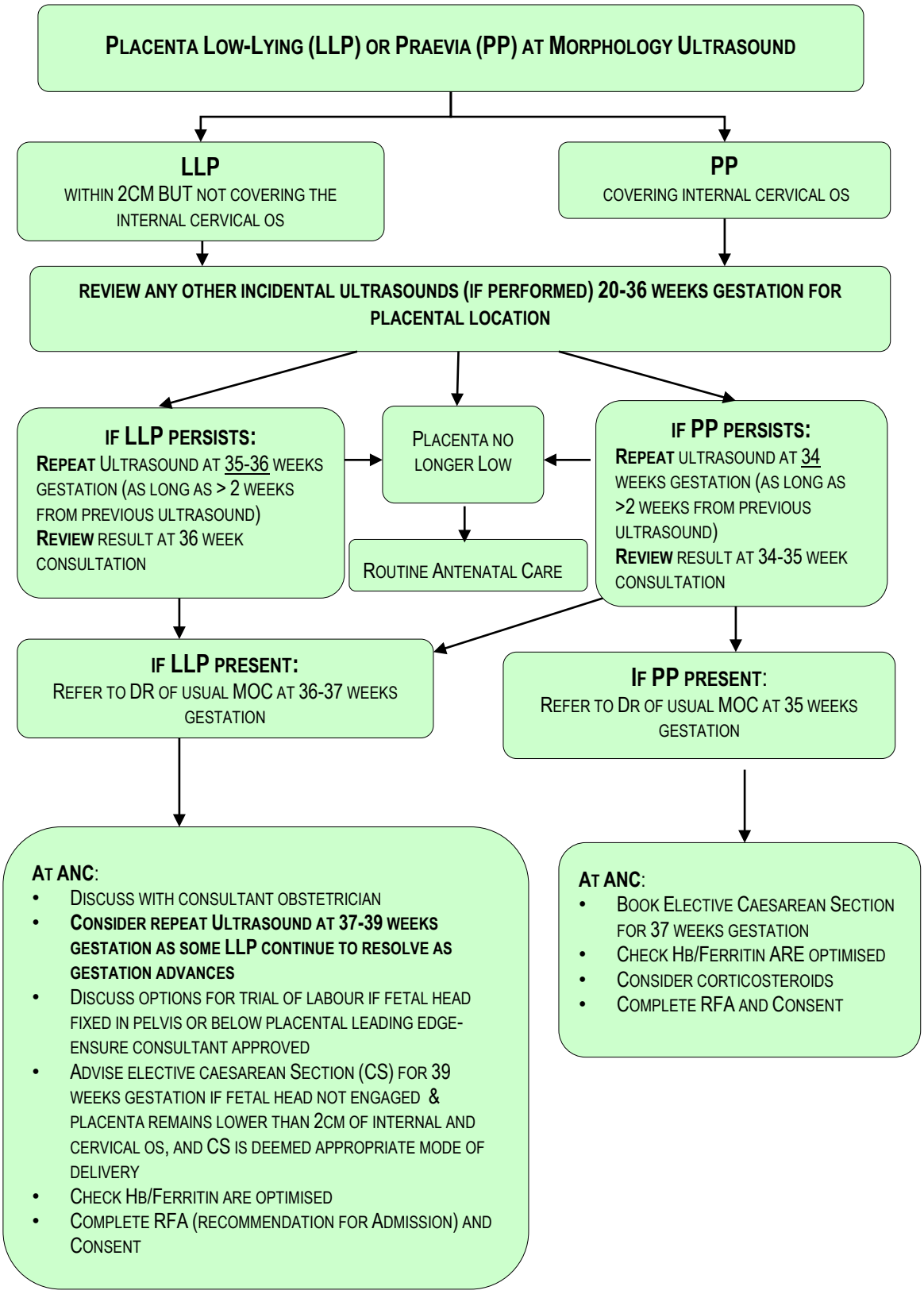
PLACENTA LOW-LYING (LLP) OR PRAEVIA (PP) AT MORPHOLOGY ULTRASOUND
LLP
WITHIN 2CM BUT NOT COVERING THE INTERNAL CERVICAL OS
PP
COVERING INTERNAL CERVICAL OS
REVIEW ANY OTHER INCIDENTAL ULTRASOUNDS (IF PERFORMED) 20-36 WEEKS GESTATION FOR PLACENTAL LOCATION
IF LLP PERSISTS:
REPEAT ULTRASOUND AT 35-36 WEEKS GESTATION (AS LONG AS > 2 WEEKS FROM PREVIOUS ULTRASOUND)
REVIEW RESULT AT 36 WEEK CONSULTATION
PLACENTA NO LONGER LOW
ROUTINE ANTENATAL CARE
IF PP PERSISTS:
REPEAT ULTRASOUND AT 34 WEEKS GESTATION (AS LONG AS >2 WEEKS FROM PREVIOUS ULTRASOUND)
REVIEW RESULT AT 34-35 WEEK CONSULTATION
IF LLP PRESENT:
REFER TO DR OF USUAL MOC AT 36-37 WEEKS GESTATION
IF PP PRESENT:
REFER TO DR OF USUAL MOC AT 35 WEEKS GESTATION
AT ANC:
• DISCUSS WITH CONSULTANT OBSTETRICIAN
• CONSIDER REPEAT ULTRASOUND AT 37-39 WEEKS GESTATION AS SOME LLP CONTINUE TO RESOLVE AS GESTATION ADVANCES
• DISCUSS OPTIONS FOR TRIAL OF LABOUR IF FETAL HEAD FIXED IN PELVIS OR BELOW PLACENTAL LEADING EDGE- ENSURE CONSULTANT APPROVED
• ADVISE ELECTIVE CAESAREAN SECTION (CS) FOR 39 WEEKS GESTATION IF FETAL HEAD NOT ENGAGED & PLACENTA REMAINS LOWER THAN 2CM OF INTERNAL AND CERVICAL OS, AND CS IS DEEMED APPROPRIATE MODE OF DELIVERY
• CHECK HB/FERRITIN ARE OPTIMISED
• COMPLETE RFA (RECOMMENDATION FOR ADMISSION) AND CONSENT
AT ANC:
• BOOK ELECTIVE CAESAREAN SECTION FOR 37 WEEKS GESTATION
• CHECK HB/FERRITIN ARE OPTIMISED
• CONSIDER CORTICOSTEROIDS
• COMPLETE RFA AND CONSENT