PLACENTAL EXAMINATION AND INDICATIONS FOR REFERRAL TO PATHOLOGY

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

- Identification of risk of retained products of conception
- Examination and triage of all placentae and referral for further examination as required
- Provide relevant information for future management and on-going care of the neonate
- Provide information for subsequent antenatal care
- Identify and evaluate the effect of maternal disease on the pregnancy

2. PATIENT

- Woman giving birth after 20 weeks or experiencing second trimester loss

3. STAFF

- Medical and midwifery staff
- Student midwife

4. EQUIPMENT

- Specimen bucket
- Personal protective equipment (PPE)

5. CLINICAL PRACTICE

- Don appropriate PPE when examining and disposing of the placenta
- Perform initial examination of the placenta in the clinical area where birth occurred (see appendix 1)
- Examine the placenta starting with the fetal surface[1], note:
    - presence of offensive odour
    - number of cord vessels
    - cord length and insertion
    - membranes
    - presence of amnion and chorion
    - turn placenta over and examine the maternal surface for texture, completeness, extra cotyledons and any areas of infarction
- Document findings on the partogram, eMaternity and medical record
- Send placental swabs if suspicion of infection (swab fetal and maternal surface one for each surface)
- Send placenta in a plastic bag within a specimen bucket with a sealed lid
- Ensure maternal label sticker on plastic bag and specimen bucket
- Refer to list of indications for examination of a placenta by anatomical pathology (Appendix 2)
- Send entire placenta including entire length of umbilical cord to anatomical pathology for histopathology review if either the examination was abnormal or the clinical case meets criteria as listed in Appendix 2
- Ensure detailed pathology request form is filled out listing indication for anatomical pathology review ('placenta for histology' is not sufficient). Include gestational age and Hepatitis B/C/HIV status and enclose copy of eMaternity birth summary

6. DOCUMENTATION

- Medical record

7. EDUCATIONAL NOTES

- A cord that is <32 cm is considered abnormally short and >100cm is considered abnormally long[1]
- Benefits of placental examination include; clarification of the cause of many adverse pregnancy outcomes, improvement in the risk assessment for future pregnancies, and ascertainment of newborn risk factors for long-term neurodevelopmental sequelae[1,2]

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- Information on placental abnormalities may reveal the presence of chronic fetal insults and allow their differentiation from acute stresses[2,3]
- In the case of stillbirth it is particularly important for the placenta to be examined. The most optimal results are achieved when the fetus and placenta are examined together[3]
- Patients who request to take the placenta home and who have clinical indication for anatomical pathology examination of the placenta, should be counseled about the benefits of pathological examination of the placenta. It cannot always be guaranteed that the anatomical pathology department will be able to return a placenta to the family. Individual cases must be discussed with the department of anatomical pathology and the patient.

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Stillbirth – Diagnosis Delivery Documentation and Transportation
- Third Stage Management Following Vaginal Birth
- Placenta – Removal from Hospital by Parents
- NSW Health Guideline. GL2014_006. Maternity: Indications for Placental Histological Examination. 2014
- Trauma in Pregnancy
- Refusal - Women who choose to refuse recommended monitoring and treatment in Maternity Services within SESLHD

9. RISK RATING

- Low

10. NATIONAL STANDARD

- Standard 5 – Comprehensive Care

11. REFERENCES

1 Roberts DJ. Gross examination of the placenta. Up to date [online] 2013 April. Available from URL: http://www.uptodate.com/contents/search
2 Clinical practice guideline for perinatal mortality. Version 2.2 PSANZ 2009
3 Jaiman, S, Gross Examination of the Placenta and Its Importance in Evaluating an Unexplained Intrauterine Fetal Demise, J. Fetal Med. (Sept 2015) 2:113– 120
4 Department for Health and Wellbeing, Government of South Australia, Histopathology management of the placenta, South Australian perinatal practice guideline (2019)
5 Kaplan C.G, Placental examination, LabMedicine (2007) Vol. 38 no.18
6 NHS, Norfolk and Norwich University hospitals NHS, Clinical guidelines for indications for placental examinations, 2019
7 Langston C, Kaplan C, Macpherson T, Manci E, Peevy K, Clark B, Murtagh C, Cox S, Glenn G. (1997) Practice Guideline for Examination of the Placenta: Developed by the Placental Pathology Practice Guideline Development Task Force of the College of American Pathologists. Arch Pathol Lab Med 1997; 121: 449-476.

REVISION & APPROVAL HISTORY

Reviewed and endorsed Maternity Services LOPs group 23/3/21
Approved Quality & Patient Safety Committee 20/11/14
Previous title '*Placental Examination Guideline*'
Reviewed and endorsed Maternity Services LOPs 4/11/14
Approved Patient Safety & Quality Committee 21/5/09
Obstetrics Clinical Guidelines group February 2009

FOR REVIEW : APRIL 2026

…/Appendices

Appendix 1

Triage Examination of the Placenta
(circle correct response)

MRN :
Name :
DOB :
Consultant :

	----------Normal----------	**----------Abnormal----------**
Odour	Metallic	Offensive
Cord insertion :	Eccentric / Central	Marginal / Velamentous / Other…
No. of cord vessels :	3	2 >3
Total cord length :	……..cm	< 32cm > 100cm
Maternal surface :	Intact	Incomplete Other….
Fetal membranes :	Normal and complete	Cloudy/incomplete Other….

Other placental indication for examination: None Specify……

Maternal indication for examination: None Specify……

Fetal / neonatal indication for examination: None Specify……

Appendix 2

A Guide to Indications for Placental Histological Examination

Indications for Placental Histological Examination			
Maternal	**Placental**	**Fetal**	**Neonatal**
• Systemic disorders with clinical concerns for mother or infant • Significant/active autoimmune disease • Uncontrolled pre-pregnancy diabetes • Active malignancy	Physical abnormality on gross examination (e.g. completeness of the disc and membranes, infarct, mass, vascular thrombosis, retroplacental haematoma, abnormal colour, opacification, malodour)	Preterm birth (less than 37^{+0} weeks) – spontaneous or iatrogenic	Admission or transfer to NICU at delivery (excluding gestational diabetes unless another indication present)
A diagnosis of pre-eclampsia with or without IUGR	Small or large placental size, or weight, for gestational age	Clinical concern for infection during this pregnancy (e.g., HIV, syphilis, CMV, primary HSV, toxoplasma, rubella)	Neonatal death
Intrapartum fever (above 38.5°C) and/or infection Suspected chorioamnionitis	Umbilical cord lesions (e.g., thrombosis,torsion)	Birthweight <10%	Confirmed or suspected neonatal infection/sepsis
Unexplained antepartum or intrapartum haemorrhage	Vasa praevia/suspected vasa praevia	Abnormal umbilical artery Doppler	
Placental abruption		Major congenital anomalies, dysmorphic phenotype with unknown cause and hydrops	
Severe maternal trauma		Multiple gestation	
Amniotic Fluid Index (AFI) abnormalities • Oligohydramnios (AFI less than 5cm) • Polyhydramnios (AFI greater than 25cm)		Discordant twin growth (greater than 20% variation in birth weight)	
		Stillborn	

Specimen Submission

- Please send birth summary and neonatal discharge summary or as much information as possible with the placenta – the anatomical pathology will be able to give a much higherquality report if this information is provided.
- Please send the placenta fresh in a sealed container – not fixed in formalin or frozen
- As a minimum the request form should include the following information: date of birth, indications for histology – maternal, fetal placental, relevant clinical history, gestational age,cord length including any missing portion (e.g. part of cord left with the baby for intravenous access), relevant ultrasound results, plurality , birthweight

Adapted from NSW health 'Maternity – indications for Placental Histological Examination' GL2014_006

Appendix 3

Examination of the Placenta Flowchart

Starting with the **fetal surface** note:

- Presence of offensive odour
- Number of cord vessels
- Cord length & Insertion
- Completeness of membranes
- Presence of amnion and chorion

Turnover - examine **maternal surface** for texture, completeness, extra cotyledons and areas of infarction

Document findings on partogram and in eMaternity and in medical record

- **Send entire placenta** (including cord - noting if large portion with baby) to anatomical pathology as per list of indications (Appendix 2)
- Fill out detailed pathology request form (including information:- date of birth, indication for histology, relevant clinical history, gestational age, plurality, birthweight)