Approved by Quality & Patient Safety Committee
20 November 2014

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 performed for all placentae and referral for further examination as required
- Supply of sufficient information to anatomical pathology

2. PATIENT

- Woman giving birth after 20 weeks
- Women experiencing second trimester pregnancy loss

3. STAFF

- Registered Midwife
- Student Midwife
- Medical staff

4. EQUIPMENT

- Suitable specimen bucket
- Personal protective equipment (PPE)

5. CLINICAL PRACTICE

- Use PPE when examining and disposing of the placenta
- Perform initial examination of the placenta in the clinical area where birth occurred (appendix A)
- Examine the following starting with the fetal surface[1]:
    - note presence of offensive odour
    - number of cord vessels
    - cord insertion
    - membranes
    - presence of amnion and chorion
    - turn placenta over and examine the maternal surface for texture, completeness, extra cotyledons and areas of infarction
- Document results on the partogram and in ObstetriX
- Collect a fresh specimen of placenta as outlined in Appendix B if special studies required
- Refer to list of indications for examination of a placenta by anatomical pathology (Appendix C)
- Send entire placenta including entire length of umbilical cord to anatomical pathology if either the examination was abnormal or the clinical case meets criteria as listed in Appendix C
- 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 C/HIV status and enclose copy of ObstetriX birth summary

6. DOCUMENTATION

- Integrated clinical notes
- Partogram
- ObstetriX

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LOCAL OPERATING PROCEDURE

CLINICAL POLICIES, PROCEDURES & GUIDELINES

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PLACENTAL EXAMINATION AND INDICATIONS FOR REFERRAL TO PATHOLOGY cont'd

7. EDUCATIONAL NOTES

- A cord that is <32 cm is abnormally short and >100cm is 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[2]
- Information on placental abnormalities may reveal the presence of chronic fetal insults and allow their differentiation from acute stresses[2]
- In the case of stillbirth it is particularly important for the placenta to be examined. Best 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 by the Obstetric Registrar.

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
- Women Who Choose Care Outside RHW Guidelines

9. RISK RATING

- Low

10. REFERENCES

1 Langston C, Kaplan C and Macpherson T *et al.*, ACOG Practice guideline for examination of the placenta: developed by the Placental Pathology Practice Guideline Development Task Force of the College of *Am* Pathologists, *Arch Pathol Lab Med* 121 (1997), pp. 449–476.

2 Clinical practice guideline for perinatal mortality. Version 2.2 PSANZ 2009

REVISION & APPROVAL HISTORY
Previous title *Placental Examination Guideline*
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Approved Patient Safety & Quality Committee 21/5/09
Obstetrics Clinical Guidelines Group February 2009

FOR REVIEW : OCTOBER 2019

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APPENDIX A

Triage Worksheet (adapted from ref 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…….

Special studies requiring fresh placental tissue (adapted from ref 1)

1. Bacterial culture :

   Indications: suspected chorioamnionitis, premature rupture of the membranes, maternal fever >38.5^{c}.
   Specimen: tissue and swabs from the chorionic plate and peripheral membranes placed in sterile saline.

2. Viral nucleic acid testing :

   Indication: clinical suspicion of viral infection
   Specimen: Send 1.5 x 1.5cm piece of placenta in yellow top sterile container. Include pathology request form for Multiplex viral PCR.

3. Cytogenetic studies :

   Indication: clinical suspicion of chromosomal/genetic abnormalities; multiple congenital malformations, stillbirth.
   Specimen: tissue taken from the mid portion of the placenta placed in tissue culture medium. (Birthing Unit Treatment Room fridge)

4. Metabolic studies :

   Indication: fetal hydrops or family history of metabolic disease.
   Specimen: at least 10 – 20g of villous tissue rapidly frozen.

Recommended Indications for Examination of the Placenta by Anatomical Pathology

Maternal Indications :

- Systemic disorders with clinical concerns for mother or infant (eg, severe diabetes, hypertensive disorders, collagen disease, seizures, severe anaemia <9gl)
- Peripartum fever >38.5[c] and/or infection
- Suspected chorioamnionitis
- Severe maternal trauma
- Active malignancy in pregnancy (e.g. requiring chemotherapy in pregnancy for breast cancer)
- Unexplained third-trimester bleeding or intrapartum haemorrhage
- Clinical concern for infection during this pregnancy (eg, HIV, syphilis, CMV, primary herpes, toxoplasma, rubella)
- Severe oligohydramnios
- Unexplained or recurrent pregnancy complications (e.g., IUGR, stillbirth, spontaneous abortion, premature birth)
- Abruption

Fetal / Neonatal Indications :

- Admission to other than level 1 nursery (excluding gestational diabetes, unless another indication present)
- Stillbirth or perinatal death
- Birth weight <10th percentile
- Seizures
- Neonatal Infection or sepsis
- Major congenital anomalies, dysmorphic phenotype, or abnormal karyotype or hydrops
- Multiple gestation
- Preterm birth <37 weeks gestation spontaneous or iatrogenic
- NETS transfer

Placental :

- Physical Abnormality on gross examination (e.g. infarct, mass, haematoma, malodour or meconium, small or large placental size for gestational age)
- Vasa Praevia, suspected Vasa Praevia or
- Velamentous cord insertion if clinical impact
- Heavy meconium stained placenta

APPENDIX D

Examination of the Placenta Flowchart