PAPSCR00001 Clinical Indications for Placental Examination

Applicability This document applies to all providers submitting placenta to the anatomical pathology laboratory for testing and reporting. This is inclusive of all APL and DynaLIFE laboratories, collectively referred to here as Laboratory Services.

Purpose The purpose of this document is to serve as a practical guideline when submitting samples to the laboratory. It is to serve as a foundation for standardization, recognizing that every specimen is unique.

Guideline

Maternal/Obstetrical Indications:

- Maternal conditions with potential impact on pregnancy outcome, including but not limited to: hypertensive disorders (preeclampsia, pregnancy induced, chronic), diabetes mellitus (pre-existing, gestational), thrombophilias, autoimmune collagen vascular disease, and others (e.g. maternal cardiac or renal disease, substance abuse)
- Peripartum fever, clinical amniotic fluid or intrauterine infection
- Unexplained or recurrent pregnancy complications (severe IUGR, early or late pregnancy loss)
- Recurrent antepartum hemorrhage, clinical suspicion of placental abruption
- Severe oligohydramnios, polyhydramnios
- In utero therapy
- History of trauma during pregnancy
- Other concerns (at clinician's discretion)

Fetal/Neonatal Indications:

- Second trimester pregnancy loss (< 20 weeks GA), stillbirth (≥ 20 weeks GA), or perinatal death
- Congenital anomalies/prenatal diagnosis of genetic abnormality
- Fetal hydrops
- Fetal growth abnormalities (e.g. IUGR, decreased growth velocity, large for gestational age)
- Prematurity (≤ 32 weeks) and postmaturity (≥ 42 weeks)
- NICU admission
- Signs of severe fetal distress or compromise (e.g. abnormal Doppler, low BPP score, decreased fetal movement, fetal heart rate abnormalities, thick meconium, low Apgar score at 5 or 10 minutes, low umbilical artery pH, unexpected need for neonatal resuscitation)
- Neonatal neurological problems (e.g. severe CNS depression, neonatal encephalopathy, seizures)
- Suspected or confirmed intrauterine infection
- Multiple gestation, **if** monochorionic, discordant fetal growth (>20%), complications of multiple gestation or listed criteria (Note: other listed maternal, fetal or placental indications also apply)
- Other concerns (at clinician's discretion)

Placental Indications:

- Physical placental abnormalities (e.g. small or large for GA, infarcts, mass, vascular thrombosis, retroplacental hematoma, amnion nodosum, discoloration or opacification, malodorous)
- Umbilical cord lesions (e.g. thrombosis, true knot, torsion, absence of Wharton jelly, single artery, very short or long cord)
- Placenta accreta/morbidly adherent placenta

NOTE: Cesarean section delivery, cholestasis or pruritus of pregnancy, maternal hepatitis B infection, placenta previa, and post-partum hemorrhage are not indications for placental examination in the absence of other criteria.

Related Documents

- Acceptance of Laboratory Samples & Test Requests: https://www.albertaprecisionlabs.ca/tc/Page13874.aspx
- Alberta Precision Laboratories: https://www.albertaprecisionlabs.ca/tc/Page13850.aspx
  Test Directory – Search [*Placenta*]

References

1. Langston C, Kaplan C, Macpherson T, et al. Practice guideline for examination of the placenta. *Archives of Pathology and Laboratory Medicine* 1997;121:449-476.
2. Beata Hargitai, Tamas Marton, and Amy Heerema-McKenney. Indications for Examining the Placenta. *In: Pathology of the Placenta. A Practical Guide. T. Yee Khong • Eoghan E. Mooney Peter G. J. Nikkels • Terry K. Morgan Sanne J. Gordijn E (eds)*. Springer 2020; p31-37