Systematic Placental Examination In The Value-Based Care Era

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BACKGROUND

Anatomopathological examination of placental tissues may provide information pertinent for the diagnosis of various undesirable fetal-maternal conditions and the medical management of future pregnancies. However, most placentas are normal, coming from term deliveries after a normal pregnancy, with no complications for the mother and the newborn.

In an effort to rationalize services and standardize medical practices, provincial health authorities asked INESSS to formulate guidelines related to placenta management, including indications for the transfer of the placental tissues to the pathology laboratory for analysis.

AIM

The main objective was to develop a list of clinical conditions for which the transfer of the placenta to the pathology laboratory is recommended.

METHODS

A literature search was conducted in the following databases: Pubmed, Embase, EBVM reviews, Cochrane Library, and INAHTA. Websites of academic, professional, regulatory and governmental organizations were also consulted. All pertinent guidelines, health technology assessment reports, as well as regulatory and policy documents were retained.

A costs comparison of systematic vs selective placental examination was performed. The final list of clinical indications was chosen with local experts using a modified Delphi method. These experts also participated in the development of recommendations concerning the management of placentas.

RESULTS

Clinical Indications For The Transfer of Placentas to The Pathology Laboratory

Amongst 17 retained documents, a total of 72 clinical indications for pathological examination of placentas were identified. The Delphi process with local experts resulted in 21 maternal, 13 fetal or neonatal, and 15 placental conditions being recommended for anatomopathological consultation. All 49 indications are presented below (Table 1).

Clinical conditions

- Suboptimal or no pregnancy monitoring
- Uncontrolled hypertensive disorders
- Uncontrolled diabetes disorders (gestational or non-gestational)
- Active autoimmune disease
- Thrombophilia
- Maternal coagulopathy
- Known cancer, malignancy
- Perinatal fever, sepsis or infection (including choiorrheamnitis and funiculitis)
- Clinical concerns about infection during pregnancy (eg, HIV, CMV, syphilis, primary HSV infection, toxoplasmosis, rubella)
- Unexplained or recurrent pregnancy complications
- Prolonged rupture of membranes (>24 hours)
- Maternal coagulopathy
- Active autoimmune disease
- Severe oligohydramios
- Thick or viscous meconium
- Confirmation of a placental abnormality discovered during pregnancy
- Invasive procedure with suspicion of placental injury (eg, chorionic villus sampling)
- Other illness or maternal condition of concern to maternal or child health
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FETAL AND NEONATAL CONDITIONS (N = 13)

- Placenta abruption
- Unexplained or excessive vaginal bleeding (>1000 cm H2 O)
- Pregnancy termination for medical reasons
- Severe maternal trauma (according to clinical judgment)
- Toxoplasmosis, rubella
- Thrombophilia
- Maternal coagulopathy
- Known cancer, malignancy
- Perinatal fever, sepsis or infection (including choriornamnitis and funiculitis)
- Invasive procedure with suspicion of placental injury (eg, chorionic villus sampling)
- Clinical concerns about infection during pregnancy (eg, HIV, CMV, syphilis, primary HSV infection, toxoplasmosis, rubella)
- Unexplained or recurrent pregnancy complications
- Prolonged rupture of membranes (>24 hours)

PLACENTAL CONDITIONS (N = 15)

- Morbid adhesion of the placenta (placenta accreta, increta, percreta)
- Placental disc abnormalities
- Invasive procedure with suspicion of placental injury
- Confirmation of a placental abnormality discovered during pregnancy
- Placenta abruption
- Maternal coagulopathy
- Active autoimmune disease
- Severe oligohydramios
- Thick or viscous meconium
- Confirmation of a placental abnormality discovered during pregnancy
- Invasive procedure with suspicion of placental injury (eg, chorionic villus sampling)
- Clinical concerns about infection during pregnancy (eg, HIV, CMV, syphilis, primary HSV infection, toxoplasmosis, rubella)
- Unexplained or recurrent pregnancy complications
- Prolonged rupture of membranes (>24 hours)

CLINICAL CONDITIONS

- Maternal indication(s)?
- Neonatal indication(s)?
- Placental indication(s)?
- Fetal or neonatal indication(s)?
- Maternal coagulopathy
- Active autoimmune disease
- Severe oligohydramios
- Thick or viscous meconium
- Confirmation of a placental abnormality discovered during pregnancy
- Invasive procedure with suspicion of placental injury (eg, chorionic villus sampling)
- Clinical concerns about infection during pregnancy (eg, HIV, CMV, syphilis, primary HSV infection, toxoplasmosis, rubella)
- Unexplained or recurrent pregnancy complications
- Prolonged rupture of membranes (>24 hours)

CONCLUSION

These recommendations will promote optimal use of pathology services and will aid the decision-making process for clinicians who must decide whether to send a placenta to the pathology service or not. These recommendations will also promote standardization of clinical practices in placentas handling.