BC WOMEN'S HOSPITAL+ HEALTH CENTRE
An agency of the Provincial Health Services Authority

MEMO

To: BC and YT Diagnostic facilities and reporting radiologists

FROM: J. Andrews, H. Bos, J. Burrows, J. Liauw, K. Lim and C. Mayer *on behalf of BC MFM group*

Date: August 30th, 2021

Re: **Provincial MFM Diagnosis and Referral pathway for the small fetus**

The FHA, VIHA and BCW Divisions of Maternal fetal Medicine are seeking to standardize the referral process for small and/or growth restricted fetuses identified by ultrasound.

The proposed diagnostic criteria and the initial management algorithms are based on recently published guidelines[1,2] and are intended to be a minimal standard easily applicable in the community setting. The intent is to start integrating them into our practice as of **October 1, 2021.**

What is new?

- Definition of "small fetus" is based on either an abdominal circumference (AC) *or* Estimated fetal weight (EFW) less than the 10th percentile for gestational age (GA).
- Referral pathway is based on:
    - Gestational age at diagnosis: prior to or after 32 weeks GA
    - Biometry: AC or EFW < 3rd %ile versus between the 3rd and 10th %ile
    - Umbilical artery Doppler pulsatility Index (PI) for gestational age
- The algorithm attempts to differentiate between the small for gestational age (SGA) fetus where "smallness" is likely constitutional and fetal growth restriction (FGR) where "smallness" is likely pathological and due to underlying placental insufficiency
- Frequency of monitoring is based on a combination of the biometric measurements and umbilical artery PI values

What are the implications for diagnostic facilities and reporting radiologists?

To facilitate implementation provincially, the MFM Divisions of FHA, VIHA and BCW are requesting some assistance from the community diagnostic facilities through:

1. **Reporting of umbilical artery Pulsatility Index (PI) as part of umbilical artery assessment:**
    - If not already currently the case, we would request that the pulsatility index (PI) be reported as part of umbilical artery Doppler assessment. To assist with this, the BC Women's Umbilical artery Doppler protocol with reference for gestational age-specific PI values are posted on the BCW US webpage
    - A PI value sampled in the free loop of the umbilical artery is considered in keeping with increased placental resistance when the value plots above the 95th for gestational age.
    - Qualitative interpretation of the waveform (present, absent or reversed end diastolic flow) should be reported as previously

2. **Reporting of biometry and EFW percentiles on the ultrasound report**

   The Lessoway chart is currently the most widely used fetal growth chart in BC for fetal biometry and can be used to determine if abdominal circumference measurements are less than the 10th percentile for gestational age.

   The WHO fetal growth charts are easily available on line and can also be used to determine if fetal biometry falls less than the 3rd or 10th percentiles, and will become the recommended standard in the near future.

3. **Inserting recommendation for referral to OBGYN or MFM as per attached protocol, where applicable**

The BC MFM group thanks you for your support. Please contact me with questions or concerns regarding this practice change and its implementation.

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References:

1. Lees CC, StampalijaT, Baschat AA, da Silva Costa F, Ferrazzi E, Figueras F, Hecher K, Kingdom J, Poon LC, Salomon LJ, Unterscheider J. ISUOG Practice Guidelines: diagnosis and management of small-for-gestational-age fetus and fetal growth restriction. Ultrasound Obstet Gynecol 2020; 56: 298–312.'
2. SMFM, Gevaerd martins J, Biggio, JR, Abuhamad, A. *Society for Maternal-Fetal Medicine Consult Series #52: Diagnosis and management of fetal growth restriction*. Am J Obstet Gynecol. 2020 Oct;223(4):B2-B17