Management of preterm FGR and SGA (<37+0 weeks)

Algorithm

Review history

- Confirm gestational age/review pregnancy dating
- FGR risk factors
- Preeclampsia risk factors
- Antenatal screening (MSS1/NT, MSS2, NIPT)
- Anatomy and placental location

Review fetal causes

- Familial/genetic
- Parental consanguinity
- Infection exposure/risk
- Tertiary level anatomy review
- Serology (CMV, rubella, syphilis, toxoplasmosis)
- Offer amniocentesis - genetic & infection testing

Referral

- Obstetric specialist review timing dependent on ultrasound and Doppler waveform findings
- Consider fetal medicine if <32 weeks

Ultrasound

- Biometry
- AFV
- Doppler waveforms
  Ut A - mean PI & notches (at diagnosis only)
  Umb A - PI, forward flow, AEDF, REDF
  DV - PI, absent or reversed a wave (<32 weeks)
  MCA – to allow calculation of CPR (≥32 weeks)

Isolated SGA

EFW and/or AC 3rd–9th centile
Normal Umb A and Ut A (normal CPR ≥32 weeks)

Assess

- Ultrasound every 2 weeks – growth, Umb A & AFV
- Clinical review and BP every 2 weeks

AGA

Growth returns to normal with EFW & AC to >10th centile

- Transfer back to usual care

Isolated SGA ≥32+0 weeks

- Add MCA Doppler for CPR calculation

Isolated SGA ≥37+0 weeks

- Follow Te Whatu Ora SGA/FGR guidance

FGR Umb A with forward flow

EFW and/or AC <3rd centile at any gestation

OR

EFW or AC 3rd – 9th centile

PLUS one of these <32+0 weeks
Umb A PI >95th centile, mean Ut A PI >95th centile, or bilateral notches

PLUS two of these ≥32+0 weeks
slowing of growth, Umb A PI >95th centile, CPR <5th centile, mean Ut A PI >95th centile, or bilateral notches

Assess <32+0 weeks

- Ultrasound weekly Umb A & AFV
- Ultrasound every 2 weeks – growth
- Clinical review & BP weekly

Assess ≥32+0 weeks

- Ultrasound twice weekly Umb A, CPR & AFV
- Ultrasound every 2 weeks – growth
- Clinical review, BP & cCTG twice weekly

Plan birth

32+0 – 33+6 weeks
STV <3.5ms

34+0 – 36+6 weeks
STV <4.5ms

≥36+0 weeks
consider if Umb A PI >95th

≥37+0 weeks
for abnormal CPR and/or Ut A alone

FGR Umb A with AEDF or REDF

- Admit or transfer to unit with appropriate NICU facilities
- Corticosteroid injections at ≤34+6 weeks
- cCTG twice daily to assess STV
- Clinical review and BP daily
- Ultrasound 2-3 times per week – Umb A, DV & AFV
- Ultrasound every 2 weeks – growth

Plan birth

23+0 – 25+6 weeks Individualised care
26+0 – 28+6 weeks DV a wave absent/reversed or STV <2.6ms
29+0 – 31+6 weeks DV a wave absent/reversed or STV <3.0ms
≥32+0 weeks REDF (consider from 30+0 weeks)
≥34+0 weeks AEDF (consider from 32+0 weeks)

- Magnesium sulphate prior to birth at <30+0 weeks

Plan birth at any gestation

Persistent spontaneous decelerations on CTG
Wahine/person indications such as severe preeclampsia, HELLP or abruption

Comprehensive clinical oversight of māmā/person and pēpi wellbeing is required and may override recommendations within this algorithm

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For more information including access to Taonga Tuku Iho (national best practice guide), you can access the Carosika Collaborative website **www.carosikacollaborative.co.nz** or by using the QR code.

Abbreviations: *AC – abdominal circumference, AEDF – absent end diastolic flow, AFV – amniotic fluid volume , CPR – cerebroplacental ratio, cCTG – computerised cardiotocograph, DV – ductus venosus, EFW – estimated fetal weight , FGR – fetal growth restriction, , MCA – middle cerebral artery, PI – pulsatility index, REDF – reversed end diastolic flow, SGA – small for gestational age, STV – short term variability, Umb A - umbilical artery, Ut A – uterine artery.*

Adapted with permission from: *'Small for gestational age and fetal growth restriction in Aotearoa New Zealand He Aratohu Ritenga Haumanu mō te Tōhuatanga Kōpiri me te Pakupaku Rawa. A clinical practice guideline: Wellington: Te Whatu Ora – Health New Zealand.'*