DISCORDANCE IN TWINS

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FETAL MEDICINE UPDATE 2018
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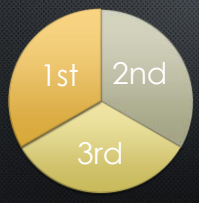
DISCORDANCE THROUGH THE TRIMESTERS

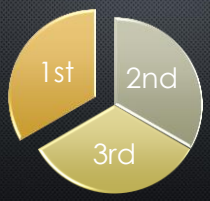


- DISCORDANCE IN SIZE
- DISCORDANCE IN EACH TRIMESTER
- ULTRASOUND TOOLS FOR SURVEILLANCE
- NOT DISCUSS ANOMALIES/TTTS/MANAGEMENT

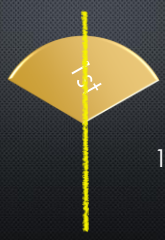
DISCORDANCE - DEFINED

$$\frac{\text{BIG} - \text{Small}}{\text{BIG}} \times 100 = \ldots.\%$$

DISCORDANCE IN THE 1ST TRIMESTER



DISCORDANCE IN THE 1ST TRIMESTER: CRL



7 – 10 weeks

11 – 14 weeks

DISCORDANCE DURING THE DATING SCAN (7-10 WEEKS)

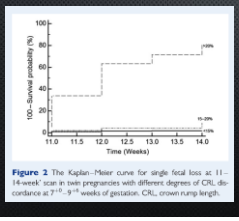
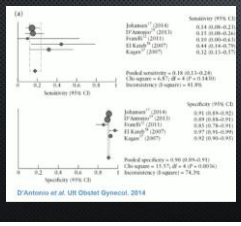


Figure 2 The Kaplan–Meier curve for single fetal loss at 11–14-week[1] scan in twin pregnancies with different degrees of CRL discordance at 7^{+0}–9^{+6} weeks of gestation. CRL, crown rump length.

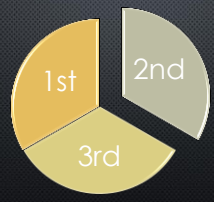
- CRL
- CUT OFF >20 % : HIGH RISK OF DEMISE PRIOR TO 11-12 WEEKS
- ANEUPLOIDY ?
- FOR DATING PURPOSES USE LARGEST CRL (CONSENSUS)

DISCORDANCE DURING THE NT SCAN (11-14 WEEKS)

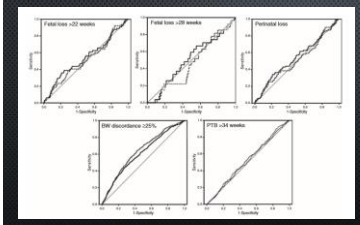


- CRL
- CUT OFF >40%: POOR PREDICTOR FOR PNM IN 2ND AND 3RD TRIMESTER
- SENSITIVITY ~20%
- SPECIFICITY 90%

DISCORDANCE IN THE 2ND TRIMESTER

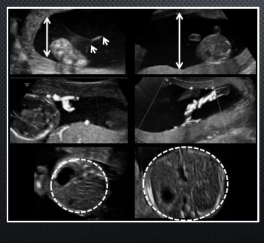


DISCORDANCE IN THE 2ND TRIMESTER (20–22 WEEKS)



- DISCORDANCE OF EFW AND AC IS A POOR PREDICTOR OF ADVERSE OUTCOME
- EQUALLY FOR DC AND MC TWINS
- EXCLUDING ANOMALIES, TTTS, ANEUPLOIDY

DISCORDANCE IN THE 2ND TRIMESTER: MCDA TWINS



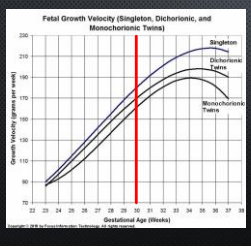
ONE OF THE FOLLOWING:

- Discordant fluid & discordant cords
- Δ AC ≥ 6 mm & discordant fluid
- Δ AC ≥ 13 mm & discordant cords
- Δ AC ≥ 24 mm

Lewi, AJOG 2008;199:493.e1-493.e7

DISCORDANCE IN THE 3RD TRIMESTER

HOW DO TWINS GROW?



- IDENTICAL TO SINGLETONS IN THE 1ST AND 2ND TRIMESTER
- GROWTH SLOWS DOWN IN THE THIRD TRIMESTER
- SLOWING DOWN MORE IN MONOCHORIONIC TWINS

MEASURING TWINS IN THE 3RD TRIMESTER

WHAT SHOULD YOU MEASURE?

- USE SAME PARAMETERS AS IN SINGLETON (HEAD/ABDOMEN/FEMUR)

ON WHAT GRAPH ARE WE PLOTTING?

- FOR NOW THE SAME GRAPH AS SINGLETONS

"NEW" DEVELOPMENTS:

TWIN SPECIFIC GRAPHS :

- DECREASE IN UNNECESSARY EARLY DELIVERIES
- MAY UNDERESTIMATE GROWTH RESTRICTION

ARE BIRTH WEIGHTS LOWER IN MULTIPLES WHEN CORRECTED FOR GA?

Sebire, UOG 2008;32:890-893

WHAT IS THE OPTIMAL CUT OFF?

Fixed Cut-Off

25%

15-25%

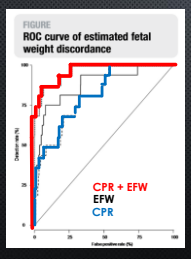
20%

18%

Variable Cut-Off

28-31 weeks	31-34 weeks	34-37 weeks
48%	20%	14%

ADDITIONAL TOOLS IN ULTRASOUND: DOPPLERS IN DC TWINS



- SITE UMBILICAL ARTERY DOPPLER? PERIVESICAL MORE REPRODUCIBLE: PI ↑ 0.1-0.2
- DOPPLER ABNORMALITIES DETECTED EARLIER BUT TAKE LONGER TO DETERIORATE
- EARLY-ONSET IUGR: TRUFFLE REGIMEN
  - UA, MCA AND DV
  - MANAGEMENT DECISION IMPACTS ALSO THE AGA CO-TWIN!
  - FROM 32 WEEKS ONWARDS, NO EFFECT ON AGA TWIN ON LONG-TERM OUTCOME
- DISCORDANCE IN LATE-THIRD TRIMESTER:
  - CPR (MCA PI/UA PI)

DISCORDANCE IN THE 3RD TRIMESTER

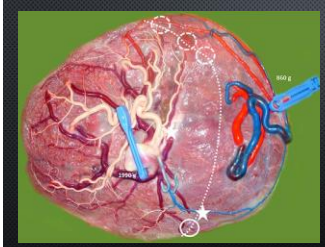
Dichorionic

- PLACENTAL CROWDING
- ABNORMAL PLACENTATION (AS IN SINGLETON)

Monochorionic

- TOTAL PLACENTAL MASS
- PLACENTAL SHARING
- NUMBER AND CHARACTERISTICS OF ANASTOMOSES

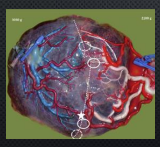
DISCORDANCE IN MC TWINS : A DIFFERENT ENTITY



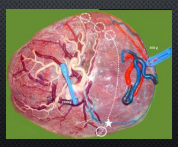
- PLACENTAL SHARING – HOW BIG IS YOUR PIECE OF THE PIE?
- NUMBER AND NATURE OF ANASTOMOSES

DISCORDANCE IN MC TWINS : DIFFERENT TYPES

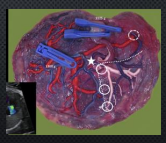
60-40, ++



80-20, +



80-20, +++



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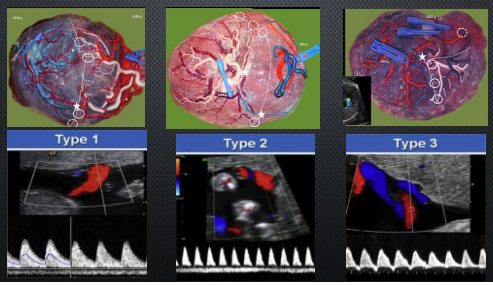
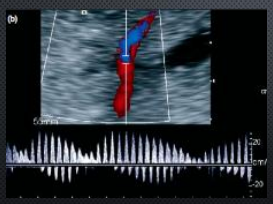


TYPE III SELECTIVE IUGR - LARGE AA ANASTOMOSES



- In up to 40% of sIUGR MC twins
- PCIs in close proximity
- Protect against TTTS
- Help with oxygenation and nutrient supply of the sIUGR twin
- However, put the AGA co-twin at risk (co-twin demise/stroke)

CONCLUSION

- Discordance is a common and unique problem in twins
- Discordance means different things at different gestational ages
- Twins do not behave like two singletons sharing a womb
- Chorionicity plays an important in revealing the unique pathogenesis and complications of discordance