



Computerized cardiotocography and perinatal outcomes in twin pregnancies with selective fetal growth restriction

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BACKGROUND

- cCTG is becoming increasingly available and is being used in the management of growth restricted singleton pregnancies.
- Use of cCTG in growth restricted twins is largely uninvestigated and based on anecdotal or scarce evidence.
- Evidence from twin studies should be available before incorporating a novel modality in the care package of these high risk pregnancies.



OBJECTIVE

To investigate the prognostic value of computerized cardiotocography (cCTG) short term variability (STV) for composite adverse perinatal outcomes (CAPO) in twin pregnancies with selective fetal growth restriction (sFGR).

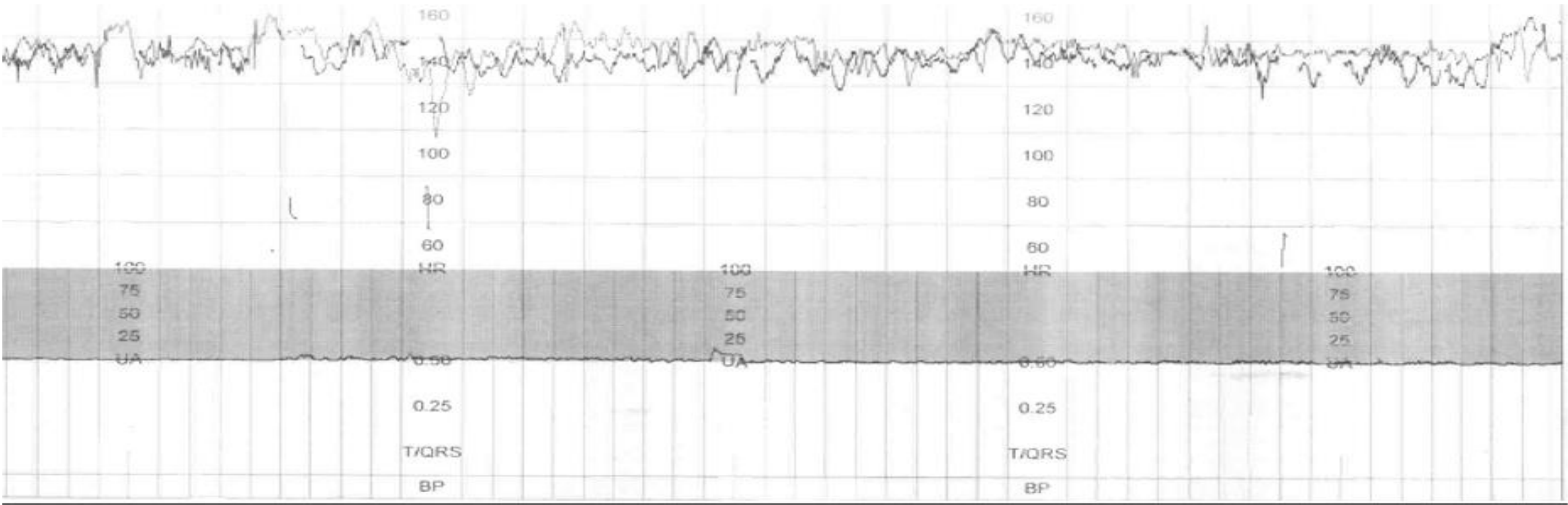
DESIGN

Multicenter exploratory retrospective cohort study

METHODS

- Records of all twin pregnancies with sFGR which had an antepartum cCTG were extracted from electronic records.
- sFGR was defined according to the Delphi consensus, irrespective of chorionicity.
- Primary outcome measure was a composite of adverse perinatal outcome (CAPO) - (intrauterine death, early neonatal death, low Apgar at 5th minute [<7] or umbilical cord blood gas arterial pH <7.1).

A REPRESENTATIVE CTG TRACE IN A DCDA TWIN PREGNANCY



RESULTS

- 63 pregnancies with sFGR were included in the study, and 126 babies were delivered. 9 babies (7.1%) met the criteria for composite adverse perinatal outcome.
- A combination of umbilical artery PI, middle cerebral artery PI, and gestational age at assessment had moderate predictive accuracy for perinatal composite adverse outcomes (AUC: 0.727, 95% CI: 0.530 to 0.924).
- The addition of STV to the model did not improve predictive accuracy (AUC: 0.731, 95% CI: 0.529 to 0.933, P=0.860). The inter-twin STV delta was -0.35 (95% CI: -1.40 to 0.69, P=0.502) and the difference was not statistically significant. Moreover, inter-twin STV delta was not significantly different between pregnancies with adverse outcomes and those without (P=0.877).

CONCLUSION

- In a cohort of twin pregnancies with sFGR, we could not demonstrate an additional prognostic value of cCTG STV to that of fetal Dopplers.