



Assessment of fetal movements by the actograph and computerised cardiotocograph

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Objective

To quantify actograph output in healthy third trimester pregnancies and investigate this in relation to computerized cardiotocograph (CTG).

Methods

42 women between 24 to 34 weeks of gestation underwent an ultrasound growth scan followed by a computerized CTG. Post-capture analysis of the actograph recording was performed and expressed as a percentage of activity over time. The actograph output results were analysed in relation to short term variation (STV) and fetal accelerations.

Results

There was no significant association of actograph output recording with STV ($R = 0.211$; $p = 0.178$). However, accelerations >10 bpm correlate significantly with actograph activity ($R=0.387$, $p=0.015$; Figure 3).

Conclusion

Fetal movements assessed by the actograph are not associated with STV. As reduced STV is predictive of fetal acidosis, the lack of association was anticipated in healthy fetuses. However, we note that our data is limited by the fact that all traces were of a relatively short duration. We report that accelerations >10 bpm were associated with actograph in our study. This suggests that actograph may be a reliable marker of movement quantification.