

Abstract

Objectives: To evaluate the usefulness of fetal vibro-acoustic stimulation test (FAST) as a screening test for fetal surveillance, its predictive values for fetal asphyxia and efficacy of FAST in converting false positive non reactive non stress tests (NST) to reactive ones.

Design: Prospective interventional study.

Setting: University Obstetrics unit, Teaching Hospital Mahamodara, Galle.

Population: 423 high risk pregnant mothers.

Method: All the subjects had an initial NST followed by a FAST. A repeat NST was recorded in subjects who had an initial non reactive NST. If the mother delivered within 24 hours after FAST the fetal outcome was assessed.

Main outcome measures: Perception of fetal movements after FAST, results of NST before and after FAST, and 5 minute Apgar score at birth.

Results: FAST showed a sensitivity and specificity of 85% and 90% respectively taking NST as the gold standard, and showed a 65% positive predictive value for fetal asphyxia if delivered within 24 hours after the test. 47% of initial non reactive NST results become reactive after FAST. Of the subjects who complained of absent or reduced fetal movements (n = 167) 67% felt fetal movements after FAST, and 82.5% of the total subjects (n = 423) noticed fetal movements after FAST.

Conclusion: Fetal acoustic stimulation test is a reliable, cost effective screening test for fetal hypoxia. It should be introduced to Sri Lanka.