

# Spontaneous fetal heart rate deceleration: an ominous sign for fetal outcome

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摘要

## Abstract

**BACKGROUND:** The aim of this study was to establish the prognostic import of spontaneous fetal heart-rate deceleration, a sign of fetal distress. **METHODS:** This retrospective study enrolled 169 patients with fetal heart-rate deceleration treated at Shin-Kong Wu Ho Su Memorial Hospital from 1 January 1998 to 24 November 2000. Reviewed variables included type of fetal heart-rate irregularity (including early, variable, late, and spontaneous variants), neonatal outcome, Doppler results, gestational age and weight at birth, and amniotic fluid index. **RESULTS:** The spontaneous form of fetal heart-rate deceleration was determined for 11 of the 169 patients (6.5%) diagnosed with fetal heart-rate deceleration, with a 5-min Apgar score below 7 observed for 5 (45.5%) of these subjects, and neonatal complications for 9 (81.8%). Mean gestational age was 32.2 $\pm$ 3.8 weeks; mean birth weight was 1,560 $\pm$ 723.9 g. Spontaneous deceleration has a sensitivity of 29%, specificity of 99%, positive predictive value of 81.8%, and negative predictive value of 86.1%. **CONCLUSION:** Although of the different fetal heart-rate deceleration types the spontaneous variant has the lowest incidence rate, the complication and mortality rates are highest and it is also associated with lower birth weight and higher incidence of pre-term labor. Failure of the fetus to cope with the compromised placental flow and uterine compression resulting from oligohydramnios may be fundamental to the etiology of spontaneous fetal-heart rate deceleration. Once diagnosed, Doppler ultrasound may be used to assess placental-vessel flow. Emergency treatment may be mandatory if deterioration is noted.