# Evaluation of PH and Apgar score of neonates born by cesarean section due to fetal distress recorded in NST in pregnant women referring to Alavi hospital in Ardabil in 1397


## Abstract

**Background and objectives:** *Cesarian section is a form of surgical childbirth in which neonate and placenta gets excisioned by an insision of abdominal and uteral wall. The prevalence of C-sections has been increased in the past decades. According to WHO a 15% rate for this surgical operation is accepted. NST is a method which monitors the fetal health and provides data on the proper time for ending the pregnancy in emergent situations, however its not very accurate in diagnosing hypoxia sometimes and may cause unnecessary C-sections.*

**Methods***: The current study was a cross-sectional analytical and descriptive survey in which, 139 neonates with an impaired Non-stress Test were enrolled. Demographic data of mothers and neonates were gathered as well as other information such as $1^{st}$ and $5^{th}$ minute APGAR scores and umbilical cord pH. Finally, the gathered information were analysed using SPSSv22.*

**Results***: The mean age of mothers was 26.17±5.18 years. The mean birth weight of the neonates was 3281±361.22 grams. 252 forms of impaired NST pattern were found in the evaluated sample of neonates. Bradycardia and late decelerations had a significant relationship with acidosis ($P<0.05$) . Also, late decelerations were associated with lower APGAR scores ($P<0.05$). umbilical artery pH was significantly correlated with $1^{st}$ ($r=0.34$; $p<0.001$) and $5^{th}$ minute APGAR scores ($r=0.32$; $p<0.001$) . Positive predictive value of NST was 48.9.*

**Conclusions***: NST has a medicore positive predictive value in diagnosing fetal acidosis. This medicore positive predictive value of NST can be a significant predictor of unnecessary C-sections in low risk pregnancies. In some cases such as tachycardia, lengthening of the NST time may reduce the rate of unnecessary C-sections, but some forms of impaired NST such as bradycardia and late decelerations, should be considered more important and may need more emergent surgical reactions.*



**Keywords***: Fetal distress, Pregnancy, Acidosis*