Once fetal blood sampling (FBS) has given a diagnosis of fetal hypoxia, delivery should occur within 30 minutes?

A prospective study looked at 107 consecutive attempts at FBS on 72 patients (Annappa, 2008). The median time from the decision to perform FBS to obtaining the result was 17 min (interquartile range: 11-22 min). The median time from result to delivery was 21 min (interquartile range: 16-25 min) in those fetuses that had abnormal results. The median time from decision to perform FBS to delivery was 37 min in cases where acidaemia was present. The authors recommended that the time taken between the decision to test and the result being available should be taken into consideration when expediting delivery of babies that may be hypoxaemic.

A Cochrane systematic review of two trials in a total of 3348 mother-baby pairs allocated to either lactate or pH estimation of fetal blood samples in labour (East 2010) found no statistically significant differences for any fetal/neonatal/infant outcomes, including low Apgar score at five minutes, admission to neonatal intensive care units or neonatal encephalopathy, or for low umbilical arterial pH, base deficit or metabolic acidaemia. There was a statistically higher success rate for lactate compared with pH estimation (risk ratio 1.10, 95% CI, 1.08 to 1.12, n = 2992). There were no significant between-group differences in mode of birth or operative birth for non-reassuring fetal status. The authors concluded that fetal scalp blood lactate estimation was more likely to be successfully undertaken than pH estimation.

Annappa R, Campbell DJ, Simpson NA. Fetal blood sampling in labour and the decision to delivery interval. Eur J Obstet Gynecol Reprod Biol 2008;141:2


Evidence Level: III

Last amended March 2013