

## Stat-strip Express- a possible handheld poc for lactate testing in fetal blood sampling during labour?

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### BACKGROUND

Although criticized for the lack of scientific evidence measurement of fetal scalp blood lactate is regarded as an additional tool to cardiotocography for assessment of intrapartum fetal well-being.

The cut-offs for intervention are based on clinical research performed in Sweden in the late 90-s (1,2) where lactate was measured with the handheld POC Lactate Pro™. Several studies have shown significant differences in the measured lactate value between different hand-held devices and therefore it should be emphasized that the cut-off values are only valid for Lactate Pro™ (3). Therefore, it is strange that no obstetrical society comments on this specific bias in their guideline for fetal monitoring (4). Lactate Pro™ is not produced anymore why there is a need for a large, well-conducted study with clearly defined asphyxia limits and with a sufficient numbers of participants. Stat strip Express from Novo Biomedical is a point of care device that analyzes lactate in 13 seconds. It also adjusts lactate to the hematocrite level. It is designed for clinical use although it has not been used for analyzing lactate in fetal blood sampling.

### Method

In our study we collected fetal cord blood and it was analysed with ABL 800 standard blood gas analyser and from the same same sample and at the same time it was also analyzed with Stat strip express. This allowed us to compare the results. 50 samples were analysed at the labour ward in Malmö Skane university hospital, Sweden.

The correlation between cord blood lactate measured with ABL 800-bloodgas analyzer and StatStrip was analysed.

### Results

In or study we found a good correlation between the two methods,  $R^2=0,958$ ..

### Conclusion

We think that Stat strip Express is an interesting device for intrapartum fetal surveillance and further studies on this device will be conducted in order to find out the cut-off values for lactate and when to intervene during labour. For the poster we will also present results from paired samples of fetal blood sampling with Stat-strip Express and Lactate pro 1.

