

FETAL FIBRONECTIN TO DETERMINE LENGTH OF TIME UNTIL ONSET OF TERM LABOUR IN RURAL WOMEN: A PILOT

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Background

- Pregnant women located in rural Australia typically travel large distances to give birth safely at an appropriate health facility.^{1,2,3}
- Deciding when to relocate is a significant decision which impacts women, their families, and treating services.^{1,2,3}
- There is a paucity of evidence based clinical decision making tools to aid this decision in the low risk, term cohort.
- Although fFN is currently used in Australia to aid with predicting preterm labour,⁴ no studies have yet explored the use of quantitative fFN to establish likelihood of labour at term.⁵
- Improving the ability to predict the likelihood of term labour has the potential to assist in the decision making of women to ensure timeliness of appropriate access to healthcare, whilst maximising patient quality of life and outcomes

Aims

- To determine if vaginal quantitative fetal Fibronectin (fFN) is predictive of onset of term labour within 1 week.

Methodology

Study design: Prospective trial

Study population: Cohort (N=39) of low risk, term patients between 16/6/2016 and 16/10/2018 opportunistically recruited within a rural, Level 5 maternity hospital outpatient antenatal clinic.

Exclusion criteria:

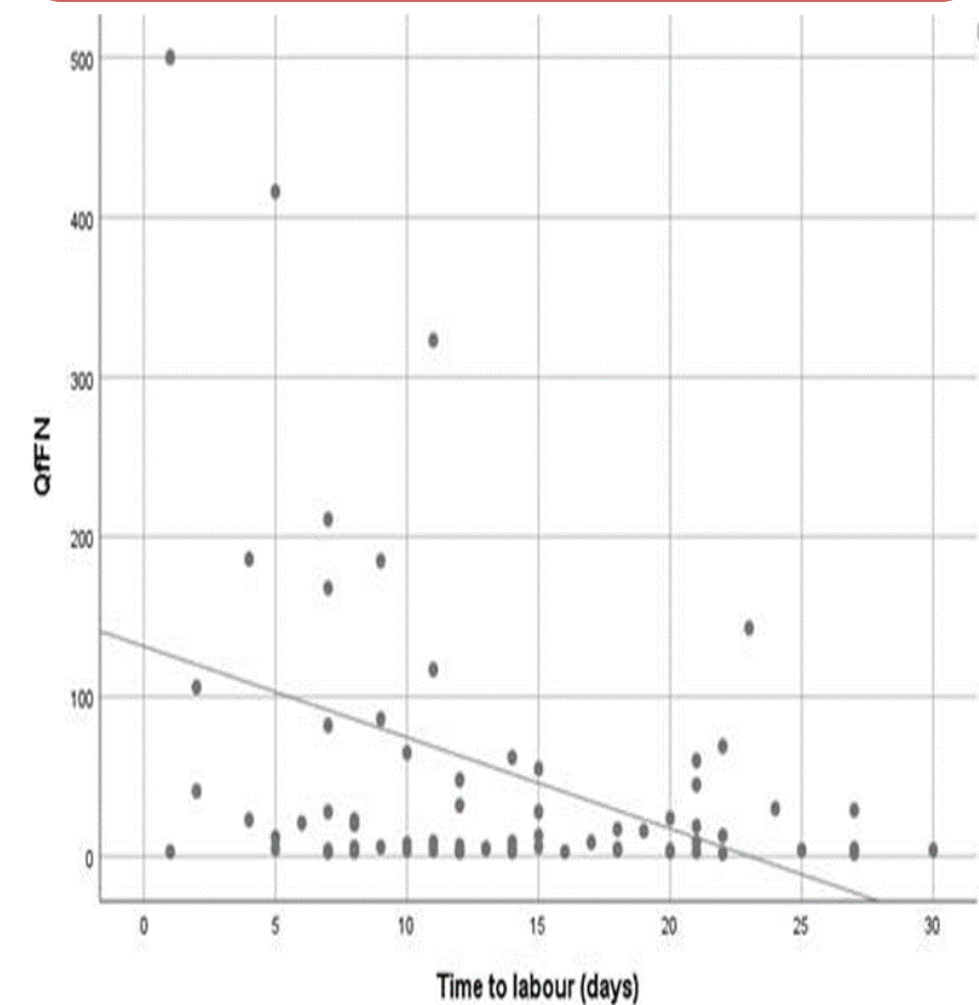
- Previous preterm birth
- Previous threatened preterm labour in any pregnancy
- Any antepartum haemorrhage in this pregnancy
- Inductions of labour prior to 40 weeks gestation
- Previous cervical surgery
- Multiple pregnancies

Methods: fFN sampling carried out at 37, 38 and 39 weeks gestation, time until either spontaneous labour or induction for post dates noted

Statistical analyses:

Sensitivity & specificity values of fFN levels. Generalised Estimating Equation to determine predictors of onset of labour at term.

Results



fFN is a significant predictor of time to labour after adjusting for confounders (Wald Chi-square = 18.85, df = 1, p < 0.001)

Using a **fFN threshold of <20.5**, for a time until labour of 7 days, we could predict **that labour would not occur with sensitivity of 67% and specificity of 66%**

Conclusion

- fFN is able to predict labour onset but has reduced diagnostic test accuracy.
- Future studies require a larger sample size for true determination of the clinical utility of fFN in low risk, term patients.

References

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