Assessing the clinical utility of quantitative fetal fibronectin (fFN) in predicting preterm birth in symptomatic women with multiple gestation: A single tertiary centre retrospective cohort study between 2019 to 2022.

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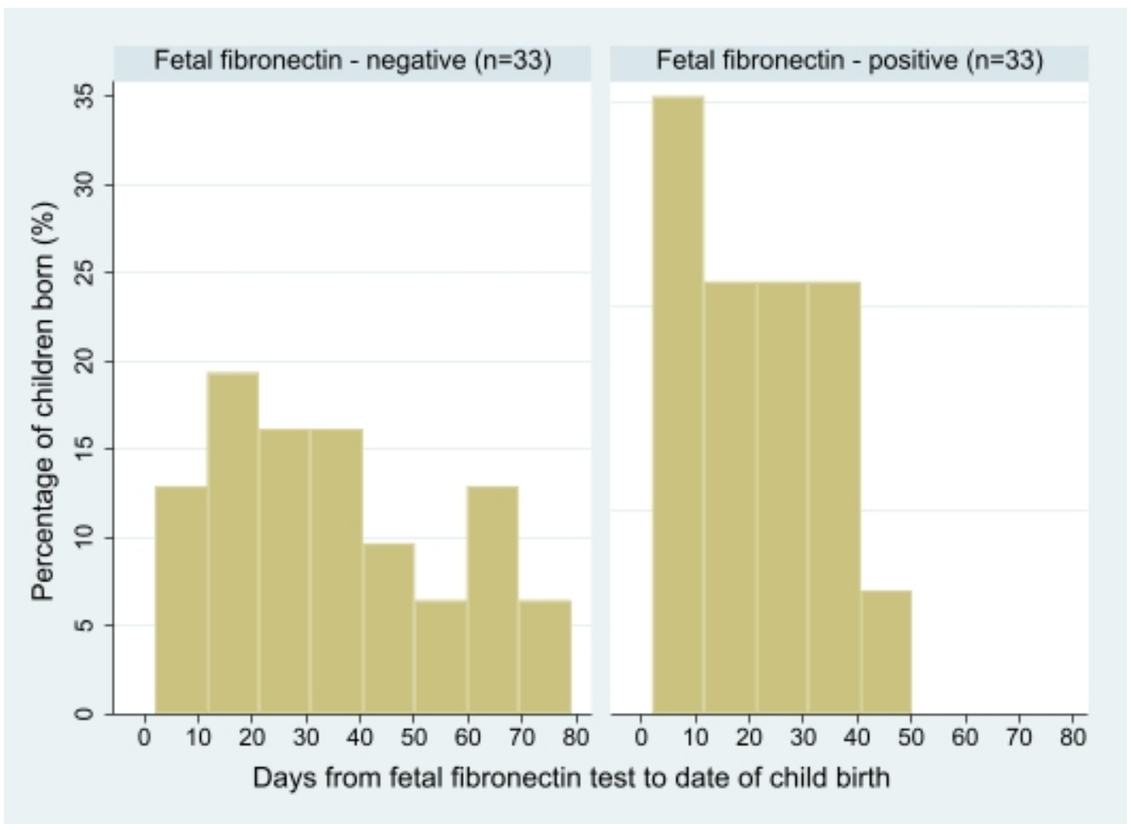
Fetal fibronectin (fFN) predicts preterm birth (PTB) in singleton pregnancies, with a high negative predictive value (99.5% for delivery <7 days, 99.2% < 14 days) in women with threatened preterm labour (TPL)1. The manufacturer guidelines states that fFN is only intended for use among singleton pregnancies as the safety and effectiveness has not been demonstrated for multiple gestation pregnancies.

Aim: to assess the clinical utility of fFN in symptomatic women with multiple gestations.

Methods

Retrospective cohort of all women between January 2019 and July 2022 at a major tertiary hospital with multiple gestations presenting with TPL (n=88). We analysed those with complete information available from hospital records and databases (n=82). We defined ≥ 50ml-1 as a positive fFN value.

A Fischer's exact test was used to compare differences between the two groups with $p < 0.05$ considered to be statistically significant.



Graph 1: Histogram comparing fFN result and time to delivery in days

Results

Of the 82 TPL presentations analysed, fFN testing was complete in 80% (n=66) with 50% being positive (n=33).

There was no significant difference between the groups delivering within 7 days (negative fFN 10% vs positive fFN 21%, p=0.305) or within 14 days (negative fFN 13% vs positive fFN 30%, p=0.132).

We found a higher proportion of women with positive fFN had a preterm birth compared to those with a negative fFN (91% vs. 73%, p=0.108).

Conclusion

The high negative predictive value reported in singleton pregnancies is not reproducible in multiple gestation pregnancies.

A positive fFN may be a predictor of PTB in multiple gestations presenting with TPL but further research into the utility of fFN in multiple gestation pregnancies is required.

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