

Introduction

Despite conflicting evidence, CRP is commonly used in cases of PPRM to aid the diagnosis of chorioamnionitis and inform management.^{1,2}

One measure of severity of chorioamnionitis is the histological severity of the fetal inflammatory response.³

Chorioamnionitis with a fetal inflammatory response is associated with higher neonatal mortality and morbidity compared to when only a maternal inflammatory response is present.^{3,4}

Objectives

To explore the relationship between CRP and histological severity of fetal inflammation in the placenta and membranes after delivery.

Method

A retrospective audit of patients from the RWH with PPRM between 23⁺⁰ to 36⁺⁶ weeks gestation between 1st January 2015 and 31st December 2016 who had both CRP and placental histopathology.

Fetal inflammatory response was classified as:

Stage 1: chorionic vasculitis or umbilical phlebitis.

Stage 2: umbilical arteritis with or without phlebitis and

Stage 3: necrotising funisitis.

We found a statistically significant difference in the mean CRP level between the no fetal inflammatory response group and stage 3 fetal response group (p=0.008).

Conclusion

Our data indicate that maternal serum CRP in cases of PPRM is significantly correlated with histological severity of fetal inflammation.

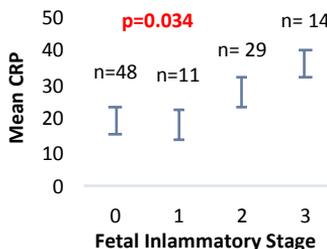
In light of these findings there appears to be some clinical utility for the measurement of CRP in cases of PPRM. Further research however is recommended to compare histological and neonatal outcomes in those cases with/without CRP testing.

Results

A study total of 104 patients were included. Of these, 48 (46%) had no histological evidence of fetal inflammation, 11 (11%) had stage 1, 31 (30%) had stage 2 and 14 (13%) had stage 3 response.

Non-parametric tests between the mean CRP (mg/L \pm SEM) levels in these groups were undertaken. There was a statistically significant relationship (p<0.05) between the mean CRP levels and increasing severity of fetal inflammatory response (19.4-response; 18.3-stage 1; 28.1-stage 2; 36.4-stage 3).

Graph 1: Mean CRP according to histological severity of fetal inflammation



References

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