Intravenous Paracetamol: A safe and effective approach for reduction of maternal fever and fetal tachycardia
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Objective
Causes of maternal fever include epidural use, oxidative stress, prolonged rupture of membranes, and chorioamnionitis. Both infectious and non-infectious aetiologies of maternal fever have been linked to fetal tachycardia as well as maternal and neonatal morbidity. Compared to oral paracetamol, intravenous paracetamol has increased bioavailability and more rapid onset of action. It has been used successfully in the management of fever in post-operative patients. We hypothesized that the intrapartum administration of intravenous (IV) paracetamol for treatment of maternal fever could lead to rapid onset of action and thereby prevent adverse maternal and neonatal outcomes associated with febrile morbidity as well as unnecessary intervention, the most concerning caesarean delivery for Category II Tracing (Tachycardia, etc).

Methods
We reviewed three cases, whereby patients that developed fevers leading to fetal tachycardia were effectively treated with IV paracetamol, leading to rapid reduction of maternal temperature and resolution of fetal tachycardia.

Results
The case series presented highlights a potential new role for the use of intravenous paracetamol for the management of intrapartum maternal fever. The patients in case 1 and 2 had temperature elevations that were refractory to oral paracetamol administration. Due to the non-responsiveness of the initial treatment with oral medication and the persistence of fetal tachycardia, caesarean delivery was considered for both patients. After intravenous administration of paracetamol, both patients experienced a rapid reduction of maternal temperature with resolution of fetal tachycardia. The patient in case 1 was able to continue pregnancy for an additional six weeks and the patient in case 2 was able to avoid a primary cesarean delivery. Consistent with the increased Tmax of intravenous paracetamol, the patient in case 3 experienced reduction of maternal temperature and resolution of fetal tachycardia 20 minutes after its administration. There was no incidence of maternal or neonatal culture positive for sepsis or infection in this series and no adverse events secondary to intravenous paracetamol administration were observed.

Conclusion
This case series demonstrates that intravenous administration of paracetamol can safely be used for the management of intrapartum fever. Further randomized trials are needed to evaluate the efficacy, maternal morbidity, cesarean delivery rate, and neonatal outcomes of treatment with intravenously versus orally administered paracetamol.