OP-07

Maternal to neonatal transmission of antibody against COVID-19 study – The TRAB CoV-19

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ABSTRACT

Introduction: This study aims to consolidate evidence of transplacental antibody transfer post-maternal vaccination aiming for neonatal protection. **Methods:** A prospective study was conducted with vaccinated pregnant women with or without a history of COVID-19 infection, admitted for delivery at term, were included. Maternal and umbilical cord blood samples were collected within 30 minutes of delivery for quantification of antibodies via ImmuSAFE® kits, and tested for nucleocapsid (N) protein (recent infection) and spike (S) protein (current vaccination) antibodies. Results were considered positive if the levels were Anti-N >4,634 and Anti-S >3,648, based on the manufacturer's instructions. **Result:** A total of 200 mother-baby dyads were included with a mean maternal age of 31.3 years. Almost all (93.9%) of our women received the mRNA vaccine (Pfizer®). Around 13.2% (n=26) of women had a history of COVID-19 infection. The Anti-S antibody following vaccination was noted to be higher (>3,648) in both groups (mother: 17,535, range 13,533-23,000; baby 18,349, range 13,982-23,139). Significant transplacental transmission of antibodies from mother to fetus was found ($p<0.06$). Otherwise, either mRNA or live inactivated vaccine had no significant effect with regard to antibody formation ($p>0.05$). **Conclusion:** Mothers with past or recent COVID-19 or a history of COVID-19 vaccination demonstrated transplacental antibody transmission to the fetus.

OP-08

Association of gestational weight gain (GWG) in obese pregnant women with pregnancy outcomes in Hospital Seremban: A retrospective study

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ABSTRACT

Introduction: We aimed to study the association between the GWG groups below, within, and above Institute of Medicine (IOM) 2009 recommendation among obese pregnant women with selected outcomes: gestational diabetes mellitus (GDM), pregnancy-induced hypertension (PIH), caesarean section (CS), small for gestational age (SGA) and large for gestational age (LGA). **Methods:** This retrospective study involved 658 obese women from Hospital Seremban, Negeri Sembilan, who were stratified into class I, II, and III obesity according to WHO classification. **Results:** The results revealed that obese women and those in class I obesity who gain beyond IOM 2009 recommendation, specifically >10 kg have a higher risk of LGA. While those gaining less than 5 kg and losing weight, have an increased risk of GDM. Increased risk for CS is observed in both, those gaining lesser and higher than IOM 2009 recommendation with proportionate trend for GWG >10 kg. Data analysis from class II and III obesity was unable to demonstrate any statistical significance. **Conclusion:** This study supports the current IOM recommendation (5-9 kg), and considers the recommendation is still relevant in balancing the risks and aiming for optimal maternal and neonatal outcomes for obese class I and obese women as a whole. Future studies involving classes II and III require bigger data to evaluate this group of obesity better. Tertiary centres should improve on documentation of booking weight and BMI in order for this kind of study to be conducted with a good sample size.