Efficacy and safety of parenteral iron dextran among pregnant women with iron deficiency anaemia and their newborns in a tertiary hospital in Malaysia

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ABSTRACT

Introduction: Maternal iron deficiency anaemia (IDA) is associated with a risk of adverse maternal and perinatal outcomes. Administration of low molecular weight iron dextran (LMWID) suggests a good safety and efficacy profile in the treatment of IDA. However, the outcomes of parenteral iron dextran among pregnant women and their newborns are unknown despite the risk of adverse effects in Malaysia. This study aimed to evaluate the efficacy and safety of iron dextran use among pregnant women and their newborns. **Methods:** This single-centre retrospective study analysed data on pregnant women who were diagnosed with IDA and received parenteral iron dextran and delivered at Hospital Tengku Ampuan Rahimah (HTAR) Klang from 2020 to 2021. The main outcome measure was a haematological improvement of anaemia post-therapy pre-delivery. The impact of maternal anaemia on maternal outcomes and perinatal was studied. To assess the safety, adverse drug effects during treatment were recorded. **Results:** Among 106 patients, of which the subjects' mean age was 28.8 ±0.55 years, predominantly Malay ethnic (n= 78, 73.6). Following LMWID treatment, the was a significant increase in mean Hb of 1.53±0.12 g/dL (p-value=0.007). Other parameters including mean corpuscular volume (MCV) (p-value<0.05) and hematocrit (p-value=0.003) also improved significantly. There was no significant association of maternal anaemia with maternal outcomes. Significance associations were seen in the severity of maternal anaemia pre-delivery with preterm birth (p-value=0.007) and NICU admission (p-value=0.044). No serious adverse event was observed for the treatment of parenteral LMWID. **Conclusion:** Maternal anaemia is associated with preterm birth and NICU admission. Parenteral LMWID provides a safe and effective iron supplementation in pregnancy-related IDA.