

32nd World Pediatrics Conference

December 04-05, 2019 | Barcelona, Spain

Hemodynamic effects of dobutamine versus dopamine in preterm infants: An update meta-analysis

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Hemodynamic effects of dobutamine versus dopamine in preterm infants: an update meta-analysis: It is a meta-analysis to compare the effects and safety of dobutamine versus dopamine in preterm infants with abnormal hemodynamic status. Study sources were up to 2017 for RCTs in which dobutamine and dopamine treatment was adopted. Included studies were conducted on preterm infants with abnormal hemodynamic status that reported mortality <28 days, treatment failure and organ effects. 7 articles were included with a total 286 patients. 5 studies reported mortality (180 patients), 4 studies reported P/IVL (145 patients), 4 studies reported P/IVH (160 patients), 2 studies reported severe P/IVH (105 patients), 3 studies reported NEC (140 patients), 2 studies reported BPD (55 patients) and 6 studies reported treatment failure (266 patients). Meta-analysis showed an increased probability in treatment failure using dobutamine treatment (RR, 1.67; 95% CI, 1.14-2.45; $P = 0.008$), whereas there was no significant difference in mortality <28 days (RR, 1.16; 95% CI, 0.70-1.91; $P = 0.57$), P/IVL (RR, 2.90; 95% CI, 0.93-9.11; $P = 0.07$), P/IVH (RR, 1.23; 95% CI, 0.73-2.08; $P = 0.44$), severe P/IVH (RR, 0.58; 95% CI, 0.21-1.62; $P = 0.30$), NEC (RR, 2.21; 95% CI, 0.60-8.09; $P = 0.23$) and BPD (RR, 1.04; 95% CI, 0.38-2.82; $P = 0.94$) between two groups. Dopamine was more effective in treatment success in therapy of preterm infants with abnormal systemic hemodynamic status. No difference was found existed in mortality <28 days and incidence of adverse organ effects in two groups.