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# Dexmedetomidine use in neonates undergoing norwood procedure does not limit narcotic exposure

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**Introduction:** In recent years, Dexmedetomidine (DEX) is being increasingly used in the setting of cardiac intensive care for newborns undergoing complex cardiac surgery. However, there is a gap in literature describing the association of DEX on exposure to other agents, particular benzodiazepines and opioids in the first few days post-operatively in newborns. The aim of this retrospective study was to determine if DEX infusion in neonates post norwood procedure would result in decreased exposure to benzodiazepine and opioids post-operatively.

**Methods:** All cardiac surgical patients who underwent norwood procedure from 1/2011 to 6/2015 ±cardiopulmonary bypass were included. All doses of opioid and benzodiazepine received via bolus or continuous within first 48 hours post-operatively were counted with cumulative doses converted to equivalent dosage (oral morphine equivalents, ME and benzodiazepine equivalents, BE and compared between norwood patients who received DEX for sedation (DEX+) and those who did not (DEX-).Only the index surgery was included and those treated with ECMO were excluded.

**Results:** 83 patients underwent norwood palliation in the time period. DEX+ were 17/83 (20%) and DEX- were 66/83 (80%). The two groups are not significantly different preoperatively. The average cumulative dose of opioid for DEX+ group was 29.3 ME/kg and for the DEX-group was 24.0 ME/kg without significant difference ($p = 0.19$). The average cumulative dose of benzodiazepine for DEX+ group was 13.0 BE/kg and the DEX-group was 16.6 BE/kg also without significant difference ($p = 0.39$). In our analysis, length of stay was significantly higher ($p=0.034$) for DEX+ patients (mean=88, SD=60) compared to DEX- patients (mean=63, SD=58). In multivariate analysis, there still remains no difference between the groups.

**Conclusion:** Dexmedetomidine infusion in the first 48 hours after norwood procedure in neonates may not be associated with limited exposure to opioids and benzodiazepines and may be associated with longer length of stay.

## Biography

Sharada Gowda is an Asst. Professor of Pediatrics, Division of Neonatology at Baylor College of Medicine and has special interest in Neonatal Cardiology. She have undergone a year of specialty training in CVICU to understand the physiology better in order to integrate in our daily practice as a neonatology team. She is actively working on a robust teaching curriculum for residents, Fellows and NNPs.

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