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Title: *Indomethacin Prophylaxis for the Prevention of Intraventricular Hemorrhage in Preterm Neonates*

### Objective

Intraventricular hemorrhage (IVH) is a major complication of premature birth and has a large impact on the morbidity and mortality of premature neonates. Indomethacin is a pharmacological option for prophylaxis of IVH. This study assessed indomethacin therapy in the SLCH NICU and provided data regarding the rate of indomethacin use, the occurrence of IVH, and incidences of adverse effects.

### Methods

This study was a retrospective review of medical record data at a single center. Data was collected for patients born at  $\geq$  26 weeks gestational age and admitted to the SLCH NICU in 2017 and 2018. Data was divided into four categories: delivery, demographics, outcomes, and indomethacin prophylaxis.

### Results

77% of patients born at 26 weeks gestational age received at least one dose of indomethacin. 48% of patients who received indomethacin developed IVH, 29% of those patients developed grade IV IVH. Of the patients who received indomethacin, 26% developed NEC, 17% developed SIP, 58% developed BPD, and 35% required vasopressor use in the first week of life. Lastly, only 73% of the patients who received indomethacin received all three doses.

### Conclusion

Overall, there was a higher incidence of IVH in patients who received indomethacin compared to those who did not. Additionally, there were higher incidences of all adverse effects in those patients who received indomethacin. There were many limitations to this study, however it does not show a decreased incidence of IVH in patients receiving prophylactic indomethacin and the risks and benefits must be assessed for each patient.