

# **INTRAVENOUS IMMUNOGLOBULIN G (IVIG) THERAPY VERSUS EXCHANGE TRANSFUSION FOR SEVERE HYPERBILIRUBINEMIA IN NEONATES AT KIJABE HOSPITAL – A 4 YEAR RETROSPECTIVE COMPARATIVE STUDY**

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**Background:** Neonatal hyperbilirubinemia is the second commonest cause of admission of neonates in AIC Kijabe Hospital newborn unit. Treatment modalities here include phototherapy and IV fluids for moderate hyperbilirubinemia. Exchange transfusion and IVIG have been used independently in severe hyperbilirubinemia with risk of kernicterus.

**Objective:** To compare use of intravenous immunoglobulin to exchange transfusion in neonates with severe indirect hyperbilirubinemia at AIC Kijabe Hospital.

**Methods:** We undertook a retrospective study of neonates admitted with severe hyperbilirubinemia requiring either exchange transfusion or IVIG.

Between January 2014 to December 2015, 21 exchange transfusions were performed. From January 2016 -December 2017, 25 IVIG treatments and 3 exchange transfusions were performed while 5 neonates required both modalities. Initial bilirubin at admission, change with phototherapy, and bilirubin levels after exchange transfusion or IVIG were recorded in addition to basic demographic information.

**Results:** The rate of bilirubin drop was initially higher post exchange transfusion at 43.8% compared to post IVIG at 24.1%. Twelve hours later, the post exchange bilirubin rose by 25.3% compared to only 1.8% rise post IVIG. Between 24 to 72 hours, there was a higher bilirubin drop rate post IVIG compared to post exchange transfusion.

Only 8% of neonates had significant rebound hyperbilirubinemia post IVIG compared to 37.5% post exchange transfusion.

The median hospital stay was 1.5 times longer and the median duration of phototherapy 1.7 times higher post exchange transfusion compared to post IVIG respectively.

**Conclusion:** Use of IVIG in severe hyperbilirubinemia caused faster drop in bilirubin levels and lowered the rate of rebound hyperbilirubinemia compared to exchange transfusion. The use of IVIG should be considered as a first line mode of treatment in severe hyperbilirubinemia.