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Effect of phototherapy with aluminum foil reflector on neonatal hyperbilirubinemia

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Background: Neonatal hyperbilirubinemia (NH) is the most common problems in neonates which can be treated with blue lights phototherapy. Developing country with limited medical equipment's and funds have difficulty to provide the effective phototherapy to treat NH which will increase the risk of bilirubin encephalopathy. Phototherapy with white reflecting curtains can decrease the duration of phototherapy.

Aim: The aim of this study was to determine the difference between duration of phototherapy with aluminum foil reflector and phototherapy without reflector in term neonate with NH.

Method: Open clinical trial was conducted from July to August 2013 at Dr. Hasan Sadikin Hospital, Bandung, Indonesia. The inclusion criteria in this study were term neonates with uncomplicated NH presenting in their first week of life which divided into two groups, phototherapy with aluminum foil reflector and phototherapy without reflector. The outcome measured was the duration of phototherapy using survival analysis and the difference between two groups was tested by Gehan methods.

Result: 70 newborns who fulfilled the inclusion criteria divided into two groups have same characteristic. The duration of phototherapy with aluminum foil reflector (n=35) was 72 hours and duration of phototherapy without reflector (n=35) was 96 hours. The result showed that duration of phototherapy with aluminum foil reflector was significantly shorter compared to phototherapy without reflector (p<0.0001).

Conclusion: The duration of phototherapy with aluminum foil reflector was significantly shorter compared to phototherapy without reflector.

Biography

Tony Ijong Dachlan has completed his MD on 2001 years from Marantha Christian University, Bandung, Indonesia and completed his pediatric residency training from San Juan de Dios Educational Foundation; Inc., Manila, Philippines on 2006. From 2007-2012, he was trained in Neonatology Department at Kandang Kerbau Women's and Children's Hospital Singapore. He is presently working at St. Borromeus Hospital, Bandung, Indonesia.

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