Effect of Phototherapy on Blood Levels of Endothelin-1 and Nitric Oxide in Hyperbilirubinemic Newborn Infants

Nagla H. Abu Faddan MD1, Nafisa H. R. Abd El-Aziz MD1, Hanan G. Abd El-Azeem MD2, and Tahra Shreif MD

Abstract:

Background: The principal sites of neonatal phototherapy (NNPT) action may localize not only in the skin but also in capillary circulation under the skin. Thus, the safety of phototherapy particularly in relation to hemodynamic control must be investigated. Since regional blood flow is affected by Endothelin-1 (ET) and nitric oxide (NO), it is important to study the effect of phototherapy on circulating levels of both of them and to use the changes of vital signs as markers for hemodynamic stability. Aim: This study aimed to evaluate the effect of phototherapy on blood ET and NO in hyperbilirubinemic newborn infants of different gestational ages with stable vital signs and to observe changes in vital signs in those newborn infants after 24 hours of phototherapy. Methods: This study included 50 newborn infants (29...