Abstract

Introduction: This paper presents the results of a study on pain reduction in newborns that undergo painful medical procedures. This research analyzed the reactions of babies before and after the heel lance procedure, a diagnostic test performed to detect phenylketonuria. This test involved the extraction of a capillary blood sample with a heel lance, a medical procedure that is painful for neonates. Objective: The main objective of this research was to evaluate the effectiveness of a 24% oral glucose solution and breastfeeding during heel lance. Method: An experimental study was thus conducted on a sample of 93 newborns in the San Cecilio University Hospital in Granada in 2010. The babies in the sample were divided into three groups, depending on what they ingested during the heel lance. Results: The results obtained showed that there was an association between the difference in HR and the time before the newborn's HR returned to normal after the heel lance ($r = 0.562; p = 0.000$). Moreover, a positive relation was found between the absolute difference in HR and the difference in oxygen saturation (OS) ($r = 0.538; p = 0.000$). Conclusion: The OS was found to be greater in the group of newborns that received breast milk.

Keywords