

Reference Values of Perfusion Indices in Hemodynamically Stable Newborns during the Early Neonatal Period.

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We aimed to determine reference values of perfusion index (PI) in healthy newborns during the early neonatal period.

Preductal (right hand) and postductal (foot) PI values were assessed during the first 5 days of life by using a new generation pulse oximetry.

A total of 241 newborn infants (196 [81.3 %] term and 45 [18.7 %] preterm) were enrolled to the study. On the first day, in term infants, the median (interquartile range [IQR]) preductal and postductal PI were 1.35 (1.02-1.91) and 0.88 (0.62-1.22), respectively ($p = 0.001$). These values were 0.88 (0.60-1.26) and 0.61 (0.35-0.92) in preterm infants, with the same respect ($p = 0.001$). From the first to third days, preductal PI remained significantly higher than the postductal PI ($p < 0.001$, for all comparisons). Both preductal and postductal PI of term newborns were significantly higher than those of preterm infants ($p < 0.001$, for both comparisons). These differences in PI disappeared on the fifth day of life.

Conclusion

PI values which reflect peripheral perfusion seem to reach to a steady state on the fifth day of life following physiological maturation.