

Invasive versus noninvasive hemoglobin measurement by pulse CO-Oximeter in neonates admitted to NICU

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Study Design

Prospective study in healthy preterm and term infants who were hemodynamically stable.

Results

Recordings were obtained from 76 stable infants (median gestational age at measurement: 36 weeks [range: 34–43 weeks]; median body weight: 1890 g [range: 1095–4360 g]). The spectroscopic haemoglobin values were corrected for inhomogeneous distribution of haemoglobin in the tissue. The venous and spectroscopic haemoglobin values were then compared by using the BlandAltman method, which gave an error of <5%.

Conclusions

This is a good relation between the 2 methods for measuring haemoglobin. Larger studies are required to validate this non invasive method in those with conditions that affects the perfusion.