Oxygen Saturation In Healthy Infants Immediately After Birth.

Kamlin C.O., O'Donnell C.P., Davis P.G., Morley C.J. *J Pediatr.* 2006 May;148(5):585-9.

Objective

Because the optimal concentration of oxygen (FiO2) required for stabilization of the newly born infant has not been established, the FiO2 is commonly adjusted according to the infant's oxygen saturation (SpO2). We aimed to determine the range of pre-ductal SpO2 in the first minutes of life in healthy newborn infants.

Methods

We applied an oximetry sensor to the infant's right palm or wrist of term and preterm deliveries immediately after birth. Infants who received any resuscitation or supplemental oxygen were excluded. SpO2 was recorded at 60 second intervals for at least 5 minutes and until the SpO2 was >90%.

Results

A total of 205 deliveries were monitored; 30 infants were excluded from the study. SpO2 readings were obtained within 60 seconds of age from 92 of 175 infants (53%). The median (interquartile range) SpO2 at 1 minute was 63% (53%-68%). There was a gradual rise in SpO2 with time, with a median SpO2 at 5 minutes of 90% (79%-91%).

Conclusion

Many newborns have an SpO2 <90% during the first 5 minutes of life. This should be considered when choosing SpO2 targets for infants treated with supplemental oxygen in the delivery room.