C5-18: Eye Examinations for Retinopathy of Prematurity: Do Infants Suffer Adverse Effects?

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Abstract:
Introduction: Eye examinations to monitor retinopathy of prematurity (ROP) are routinely required in all neonatal intensive care units (NICU). Although there are anecdotal reports of
deterioration in condition after the exam, systemic effects of this procedure have not been investigated. The eye examination is a painful, invasive procedure that may trigger physiologic responses to pain. In addition, eye drops given before the examination may be absorbed systemically, and the effects of these drugs on preterm infants are unknown. The purpose of the study was to examine if there are changes in infant health status following eye examination for ROP. The primary research question: Is there an increased frequency of adverse physiologic events in the two days following the eye examination as compared with the two days prior to the examination?

Method(s): The study used a medical record audit of 50 infants undergoing their first ROP eye examination. Physiologic changes and illness events were recorded for two days before and after the eye examination using a tool that tracked parameters of respiratory, cardiovascular, gastrointestinal, and neurological status. Data collection included illness severity measured by the Neonatal Therapeutic Interventions Scoring System (NTISS) before and after the examination.

Results: The mean gestational age was 28 weeks at birth, and 32 weeks at eye examination. Mean infant weight was 1.449 Kg (3.188 lbs). There were no significant changes in illness severity (NTISS) scores before or after the eye examination. Exact p-values for changes in frequency of physiologic events were calculated for McNemar’s test for comparing paired proportions. There was a significant increase in apnea events (p=.04) in the 24-48 hour time period after the eye examination. There were no significant differences in other physiologic events such as bradycardia, oxygen desaturation, feeding intolerance, or seizures.

Discussion & Conclusions: The finding of apnea 24 hours after the eye examination is clinically significant because some infants are discharged home soon after the ROP eye examination and this may impact caregiver education. Continued research is needed to guide the practice of nurses who care for preterm infants during and after eye examinations.

Abstract History:
This abstract has been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.
Parts of the abstract were submitted to SNRS earlier this year before there were results from the research. The abstract has been rewritten to include significant results that may qualify for "late breaker."

Financial Disclosure:
No, I (or a member of my immediate family) have not received something of value* from or own stock (or stock options) in a commercial company or institution related directly or indirectly to the subject of my presentation.

FDA Disclosure:
I will not be describing any pharmaceutical and/or medical device.

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