

## Validation of G-ROP Screening Guidelines in Pakistan

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### Introduction

An estimated 15 million children are born preterm worldwide and an estimated 32,000 preterm infants suffered from because of Retinopathy of Prematurity (ROP) [1-3]. It is believed, in preterm infants the network of vessels is incomplete and the increased blood oxygen saturation outside the mother's womb decreases the drive for vascularization by decreasing Vascular Endothelial Growth Factor (VEGF) production required for vessel growth. This results in ischemia and cell death of the non-perfused retina [4,5].

The G-ROP criteria have shown promise in western countries. Our goal is to test and validate the G-ROP criteria and detect other factors that increase the risk for developing ROP in the patient population at The Aga Khan University.

### Objective of the Study

The objectives of this study is to determine the validity of the G-ROP guidelines along with detection of other factors like antenatal steroid, maternal chorioamnionitis, Bronchopulmonary dysplasia, hydrocephalus that may be useful in predicting ROP outcomes in the study population.

### Methodology

Retrospective cross-sectional chart review from 1<sup>st</sup> February 2019 - 1<sup>st</sup> February 2021. The study will be conducted in the neonatal intensive care unit, which is a 24-bed state of art NICU, over two years after university ethical approval.

Literature suggested the prevalence of ROP is 21.7% and sensitivity and specificity of G-ROP screening is 96% and 93% respectively. With a 5% margin of error, the sample size required is 291.

### Inclusion criteria

All infants admitted to the NICU at AKUH, who have undergone an ROP examination having a known ROP outcome will be included in the study.

Infants who are lost to follow up, i.e. infants who had a known ROP outcome but later did not follow in the clinic and did not get any treatment will be excluded.

### Data collection process

The Data will be collected in predesigned proforma. Files containing written inpatient and outpatient medical data will be obtained from HIMS (Health information management services). Electronic patient data will be viewed on the "mypatients" portal.

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### Plan of analysis

The 95% confidence intervals (CIs) for measures of sensitivity and specificity will be calculated using the Wilson score method. The sensitivity and specificity of the current guidelines will be compared to that of the G-ROP guidelines and will be considered valid if sensitivity and specificity are greater than or equal to the current guidelines.

We will obtain an ERC exemption from AKU ERC.

### Limitations of the Study

This is a single-centre study at a private hospital that has an NICU that operates at standards of care like the hospitals in the west, located in Karachi.

### Bibliography

1. Freitas AM., *et al.* "Incidence and risk factors for retinopathy of prematurity: a retrospective cohort study". *International Journal of Retina and Vitreous* 4 (2018): 20.
2. Blencowe H., *et al.* "Preterm-associated visual impairment and estimates of retinopathy of prematurity at regional and global levels for 2010". *Pediatric Research* 74.1-1 (2013): 35-49.
3. Fierson WM. "Screening Examination of Premature Infants for Retinopathy of Prematurity". *Pediatrics* 142.6 (2018).
4. Jensen AK., *et al.* "Postnatal Serum Insulin-Like Growth Factor I And Retinopathy Of Prematurity". *Retina* 37.5 (2017): 867-872.
5. Dogra MR., *et al.* "An Update on Retinopathy of Prematurity (ROP)". *Indian Journal of Pediatrics* 84.12 (2017): 930-936.

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