Risk Factors for Retinopathy of Prematurity in Chinese
Yau GSK(1), Lee JWY(1), Tam VTY(1), Liu CCL(2), Yuen CCY(1)
(1) Department of Ophthalmology, Caritas Medical Centre, KWC
(2) Department of Applied Mathematics, The Hong Kong Polytechnic University, Hong Kong SAR, People’s Republic of China

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Introduction
Retinopathy of prematurity (ROP) is a vasoproliferative disease of the developing retina, most vulnerable to low birth weight, pre-term neonates. ROP has emerged as one of the leading causes of childhood blindness in developed nations. With advancement and modernization in neonatal intensive care units, the increased survival rates for extremely preterm infants (gestational age, GA 28 weeks), has increased over the past decades.

Objectives
The aim of this study was to determine the incidence and risk factors of ROP development and Type 1 ROP in extremely preterm Chinese infants.

Methodology
A retrospective review of medical records was performed of all extremely preterm neonates (gestational age, GA 28 weeks) screened for ROP from 2007 to 2012 at an ophthalmology centre in Hong Kong. Thirtythree maternal and neonatal covariates were analyzed using univariate and multivariate regression analyses for both ROP and Type 1 ROP.

Result
During the study period, a total of 612 preterm infants were screened. Out of the 612 infants that received screening, 139 (22.7%) met the inclusion criteria of extremely preterm (GA 28 weeks). The mean gestational age (GA) was 26.41.13 weeks and the birth weight (BW) was 855.0199.0 g. The incidence of ROP development was 60.7% and 16.2% for Type 1 ROP. On univariate analysis, 6 risk factors were identified for
ROP development including: lighter BW; lower GA; postnatal hypotension; inotrope use; surfactant use; and invasive mechanical ventilation (all P 0.01). On multivariate analysis, neonatal congenital heart disease and greater GA were protective factors for ROP development (P 0.04). On the other hand, 4 risk factors were associated with Type 1 ROP development in univariate analysis, including: lower GA, lighter BW, multiple pregnancies, and invasive mechanical ventilation (all P 0.02); while there was no significant risk factors on multivariate analysis. A lighter BW and lower GA were the only common independent risk factors for both ROP and Type 1 ROP while neonatal congenital heart disease and greater GA were the protective factors against ROP.