



STUDY OF RETINOPATHY OF PREMATURITY SCREENING AND IT'S RISK FACTORS IN NEONATES ADMITTED AT A TERTIARY CARE HOSPITAL

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KEYWORDS :

INTRODUCTION

Retinopathy of prematurity (ROP): Condition characterized by the development of abnormal retinal vessels secondary to an incomplete vascularisation of the retinal tissue due to hyperoxia causing down regulation of VEGF and death of endothelial cells.

This mechanism suggests that VEGF plays a vital role for the endothelium.

Following the closure of growing vessels, the retinal tissue in development becomes ischemic and hypoxic. This process up regulates VEGF leading to neovascularisation.

AIMS & OBJECTIVES

Advances in neonatal care promoted increased survival rates of preterm infants, with a consequent increase in the number of children affected by retinopathy of prematurity (ROP).

To estimate the incidence of ROP and evaluate potential risk factors associated

STUDY DESIGN & METHODOLOGY

A retrospective cohort study of preterm infants admitted in a tertiary neonatal intensive care unit was conducted. Neonates were examined by ophthalmologist with binocular indirect ophthalmoscope and their examination findings were documented.

Inclusion Criteria

- (1) $BW \leq 1500$ gm or $GA \leq 32$ weeks OR
- (2) $BW > 1500$ gm or GA from 32 to 37 weeks and Any of the following risk factors: respiratory Distress syndrome, birth asphyxia sepsis, blood transfusions, multiple pregnancies, intraventricular hemorrhage

Exclusion Criteria

1. Babies born at >34 weeks of gestational age and >2000 grams without risk factors.
2. Guardians not willing to enroll for study.
3. Patient with structural brain lesion

Procedure

A 100 neonates admitted in NICU PDUMC Rajkot were included They were examined by ophthalmologist with binocular indirect ophthalmoscope.

Clinical Presentation

Out of total 100 patients examined 57 were male and 43 were female. Active form of ROP developed in 12% of cases who required vitreo-retinal surgery were also observed having younger gestational age and lower birth weight and were on longer oxygen therapy. 88% cases had spontaneous resolution on further follow-up.

FIGURES AND RESULTS

ROP And Associated Comorbidities

Birth Weight	Total	ROP Detected	ROP Not Detected
<1000 gm	20	12 (60.0%)	08 (40.0%)
1000-1500 gm	30	10 (33.3%)	20 (66.6%)

1500-2000gm	28	12 (42.8%)	16 (57.2%)
>2000 gm	22	04 (18.2%)	18 (81.8%)

Multiple Risk Factors Were Associated In 33 Patients Out Of 33 Who Had Developed ROP.

ASSOCIATED CONDITION	NO. OF PATIENTS AFFECTED
ELBW	12
BIRTH ASPHYXIA	06
BLOOD TRANSFUSION	17
SEPSIS	13
IVH	09
RDS	17

CONCLUSION

- The incidence and severity of ROP are inversely related to birth weight and gestational age. All new-born <2000 grams and <34 weeks should be screened irrespective of risk factors.
- Early screening is advised in VLBW and ELBW new-born.
- Oxygen should be used judiciously in new-born and try to limit duration as less as possible.
- Effective screening and timely intervention halted the progression of ROP to end stages.

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