



COVID IMPACT ON ROP (RETINOPATHY OF PREMATURITY) MANAGEMENT

Ophthalmology

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ABSTRACT

The severe acute respiratory syndrome coronavirus 2019 (SARS-Cov-19) associated lockdown in India led to cessation of public transport and routine outpatient department (OPD) services.. However, the need to screen premature babies for retinopathy of prematurity (ROP) continued, with reduction in those actually getting screened. ROP requires urgent treatment and has been listed as an essential medical service during the COVID-19 pandemic by both the American Academy of Ophthalmology and All India Ophthalmological Society. We discuss the impact of the COVID-19 pandemic on ROP services experienced at our center. **Aim Of The Study**-To study the ROP patients during covid-19 & prefer laser treatment over intra-vitreous injection due to difficulty in follow up due to covid and note the result.

KEYWORDS

Covid impact on rop, rop management

INTRODUCTION

The severe acute respiratory syndrome coronavirus 2019 (SARS-Cov-19) associated lockdown in India led to cessation of public transport and routine outpatient department (OPD) services. However, the need to screen premature babies for retinopathy of prematurity (ROP) continued, with reduction in those actually getting screened.[1]

ROP requires urgent treatment and has been listed as an essential medical service during the COVID-19 pandemic by both the American Academy of Ophthalmology and All India Ophthalmological Society.[2][7]

We discuss the impact of the COVID-19 pandemic on ROP services experienced at our center.

MATERIALS AND METHODS

Study Type: Retrospective; observational study.

Sample Size: 30 patients were screened for Retinopathy of Prematurity who came to our OPD or were admitted in the NICU setting in our hospital during COVID-19 Pandemic.

Study Duration: Changes in treatment modality protocols was observed in the span of 1 year.

Instruments used – 1. Indirect Ophthalmoscope with 20Diopter Lens under Topical Anesthesia (2% Proparacaine)

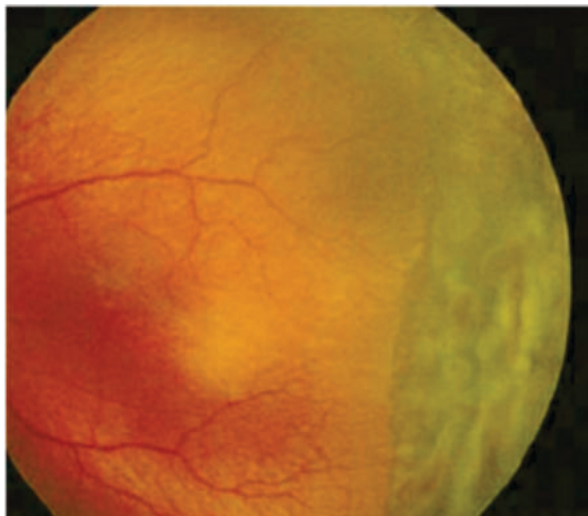
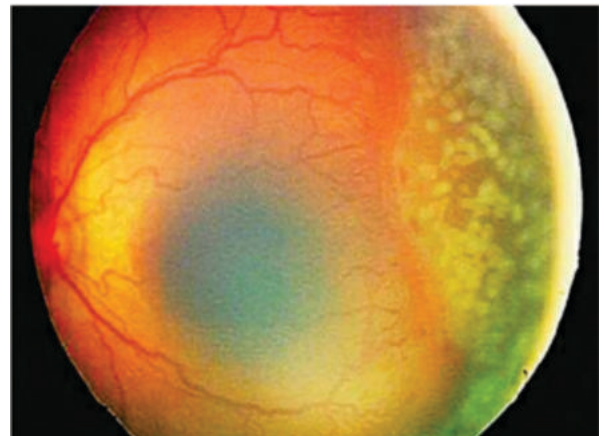


Figure 1: Fundus Photo Pre Laser



Post Laser

Demographic Data & Evaluation Before And After Treatment And Follow Up

SR NO	ROP STAGE AND GRADING	TREATMENT	1 ST FOLLOW UP	2 ND FOLLOW UP	REMARK
1	STAGE 2 ZONE 3	LASER	REGRESSION	REGRESSION	REGRESSION
2	STAGE 2 ZONE 3	LASER	REGRESSION	REGRESSION	REGRESSION
3	STAGE 2 ZONE 3	LASER	REGRESSION	REGRESSION	REGRESSION
4	STAGE 2 ZONE 3	LASER	REGRESSION	REGRESSION	REGRESSION
5	ZONE 3 (PROGRESSING APROP WITH PLUS DISEASES)	LASER	LOST FOLLOW UP	LOST FOLLOW UP	(FOLLOW UP AFTER 1 YEAR) STILL HALT IN PROGRESSION
6	STAGE 2 ZONE 3	LASER	LOST FOLLOW UP	LOST FOLLOW UP	-

CASE STUDY

During COVID-19 pandemic, due to loss of follow-up, a change in primary treatment modality from anti-VEGF injections intra-vitreous to 1st sitting Green Laser administration was proven to be more convenient and effective in the management of ROP [3] Favorable results i.e. 4 patients showed a regression of ROP with Stage – 2 Zone

– 3 using laser ablation, 1 patient with Zone – 3 progressing towards APROP with Plus disease was given Laser and was followed up directly after an year, showed halt in the progression and 1 patient who was given laser for Stage – 2, Zone – 3, lost to follow up, was observed.

CONCLUSIONS

Our Study proves that, laser photocoagulation done to ROP babies saved them from extensive vision loss even though they were lost to follow up during Covid-19 pandemic time. Laser is a preferred choice of treatment for ROP babies likely to lose for follow up and preferred above intra-vitreous for this purpose. Laser photocoagulation was increasingly preferred over intravitreal anti-vascular endothelial growth factor (anti-VEGF) agents, as the primary treatment during the lockdown period. The main reason for this was the finite nature of laser photocoagulation compared to the risk of recurrences with anti-VEGF agents, which requires regular and extended follow-up.[4] In the pre-lockdown period, all laser treatments (for outborns as well as inborns) were done inside the NICU of our institute under monitoring by a neonatologist. This sometimes entailed a wait period of 24-48 hours depending on availability of a monitoring bed in the NICU.[5]

We arranged to perform all ROP interventions in the OT itself with the focus being on same day treatment, considering the lockdown situation. A pediatrician was available on call for monitoring. This helped reduce the contact of outborn with inborn as well as other NICU healthcare professionals in addition to reducing the waiting time.[6]

All lasers were performed under topical anesthesia using personal protective equipment as per the AIOS guidelines.

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