

Paradigm change that Pakistan needs in Retinopathy of Prematurity screeningHamna Raheel,¹ Maham Raheel,² Sarim Raheel³

Madam, Retinopathy of prematurity (ROP) is an avoidable and treatable vasoproliferative disorder of the retinal blood vessels found most commonly among preterm babies. In a study conducted by Azad et al., ROP is about to have a third epidemic.¹ However, unlike the previous epidemic, it is now prevalent in middle-income countries in Asia. One of the risk factors for ROP is preterm birth. Pakistan is alarmingly one of the top five countries that contribute to 40% of preterm births in the world.¹ According to a study, the frequency of ROP in Pakistan is 28%.² However, no large-scale data has yet been collected on the prevalence of ROP. Early screening is the ideal way to prevent such a disease. Adopting telemedicine techniques, improving software with advancements in artificial intelligence, and reforming screening guidelines to include mature babies seem to be effective early detection mechanisms.

Telemedicine is a unique avenue in the screening of ROP with promising results in the future. A programme called KIDROP (Karnataka Internet Assisted Diagnosis of ROP) was introduced in India in which trained technicians visited neonatal units, screened and diagnosed on the spot using wide-field digital infant retina.³ These images were uploaded on the tele-ROP platform to be viewed by a specialist. This programme has the potential to screen over 35,000 infants, saving over 108 million dollars by reducing blind persons per year.¹ Such a programme would be ideal for a middle-income country with few ROP specialists. If there were a case of severe ROP, it would immediately be referred to the ophthalmologist. A multicenter study validated the use of telemedicine by trained nonphysicians for screening ROP.⁴

Telemedicine is rising in Pakistan, with some experts estimating a 900% growth in telemedicine companies.⁵ Recent developments in Pakistan include telemental

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health consultations offered by Aga Khan Hospital; the current mass immunization campaign against Covid 19 uses telemedicine. This surge in telemedicine services can benefit ROP screening programmes. Although doctors are keen on adopting such policies, 98.2% of doctors feel they lack the training needed for telemedicine.⁶ All stakeholders must play their part in helping build a sustainable ICT infrastructure to support telemedicine in the long run.

Clear screening guidelines should be issued by the Ministry of National Health Services Regulations and Coordination for ROP screening and policies ensuring a mass screening of high-risk neonates should be implemented. Considering the time-sensitive nature of ROP, screening should be made mandatory for all premature neonates. Ideally, neonatologists should be trained in screening for ROP using telemedicine. It can quicken the screening process and inform parents about managing the disease soon after diagnosis. It would be especially beneficial for parents from rural areas as follow-ups would be inconvenient.

Experts should train neonatologists and other healthcare workers with the first contact with premature babies to perform such screening programmes. To make any substantial gain, there needs to be a concerted effort by different sectors within the healthcare system to help ease the burden on ophthalmologists and help prevent this epidemic.

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