

Al-Umran et al³ and Choo et al⁴ who found that corneal diameter correlated positively with gestational age, birth weight and head circumference respectively.

Conclusion: This study provides the normative values for corneal diameter in Nigerian preterm babies. These can be used as reference values in their management.

The bars represent the horizontal corneal diameters at different gestational ages. The green bars represent the average right horizontal corneal diameter while the red bars represent the left horizontal corneal diameter. e.g. At 26 weeks, only 2 babies were seen and the average RightHCD was 7.8mm, Left HCD was also 7.8mm. Generally, the average HCD in both eyes increased as the EGA increased.

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Intraocular pressure with rebound tonometer at different gestational ages of preterm African babies

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Background: Normative values of intraocular pressure (IOP) in different ages of children provide an invaluable diagnostic and monitoring tool in the practice of ophthalmology.

Aim: To determine the intraocular pressure values using a rebound tonometer at different gestational ages of preterm african babies and to correlate with the birth parameters.

Methods: A hospital-based cross-sectional study carried out at the University of Ilorin Teaching Hospital, Ilorin, Nigeria. Ethical clearance was obtained from the Ethics and Research Committee of the Hospital while informed and written consent was obtained from individual parents/guardians. The minimum calculated sample size was 96 using Fisher's formula. The babies were recruited consecutively until the desired sample size was obtained. Healthy preterm babies delivered before 37 weeks of gestational age were enrolled in the study in their first week of life while unstable babies, babies with congenital anomalies, or uncertain gestational age were excluded. IOP measurements were taken in upright positions using an Ic100 Model TA011 I-Care tonometer and the average for each eye was recorded. The association between intraocular pressure and birth parameters recorded were evaluated. All measurements were taken by the principal investigator.

Results: Among the 96 preterm neonates were 46 males and 50 females with a male: female ratio of 1:1.1. The mean±standard deviation (SD) and the range of birth parameters were gestational age: 32.8±2.29 weeks, 26-36 weeks; birth weight: 1.71±0.41kg, 0.75-2.73kg; birth length: 40.66±3.08cm, 32.0-48.0cm; and occipito-frontal circumference: 30.28±2.52cm, 23-34.0cm. Figure 1 shows the distribution of mean

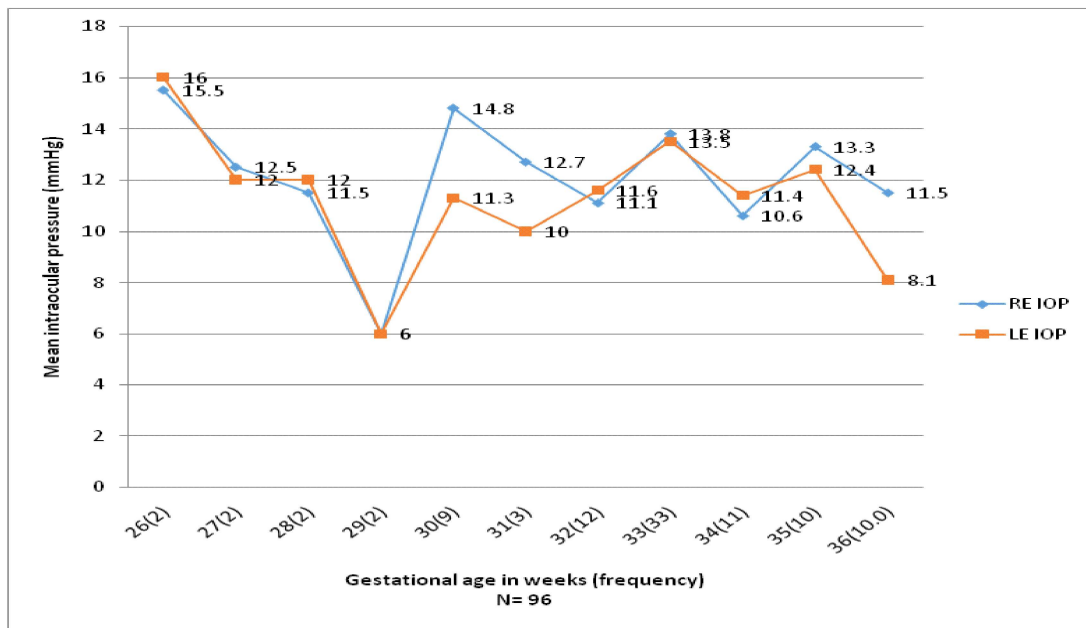


Figure 1: Distribution of mean IOP across gestational ages in preterm neonates at first week of life

Table 1: Relationship between intraocular pressure and birth parameters

Intraocular pressure	Correlation (r)	p
Birth weight	-0.113	0.272
Birth length	-0.160	0.120
Occipitofrontal circumference	0.013	0.897
EGA	-0.128	0.214

r =Pearson’s correlation co-efficient; EGA= Estimated gestational age

IOP across gestational ages in preterm neonates at the first week of life. The mean±SD and range of IOP were 12.67±2.94 mmHg, 4.00-19.00 mmHg in the right eyes and 11.87±3.32 mmHg, 3.00-19.00 mmHg in the left eyes. As shown in table 1, there was no correlation between the IOP and birth parameters (birth length, birth weight, gestational age, occipito-frontal circumference) in the preterm neonates.

Discussion: The mean IOP findings in this study were higher than the mean IOP values of 10.13±2.74 mmHg in the right eye and 10.17±2.50 mmHg in the left eye documented by Spierer *et al*¹ who measured IOP with Pulsair tonometer in 53 Israeli premature infants (mean

post conception age (PCA), 37±2.2 weeks). The difference in IOP values may be due to the variation in sample size and mean PCA.

This study indicates that IOP showed no correlation with birth weight, birth length, gestational age, and occipito-frontal circumference in preterm neonates which are in tandem with other previous studies^{2,3,4}.

Conclusion: This study provides useful normative data on IOP among African preterm babies and shows no correlation between the IOP and birth parameters. The IOP values found in this study were lower than those found in other parts of the world.

Keywords: Intraocular pressure, Preterm, African Babies, Rebound tonometer

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High incidence of retinopathy of prematurity blindness among babies born at private hospitals in Nigeria capital city- A growing concern

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Background: There are about 2,500 preterm admissions annually in Abuja, many of them in private hospitals and requiring screening for retinopathy of Prematurity (ROP). However, very few institutions provide ROP screening and treatment services and the risk of blindness from ROP is, therefore, likely to be high as a result of grossly inadequate ROP services. We report 5 cases of ROP blindness in the Federal Capital Territory (FCT), Abuja

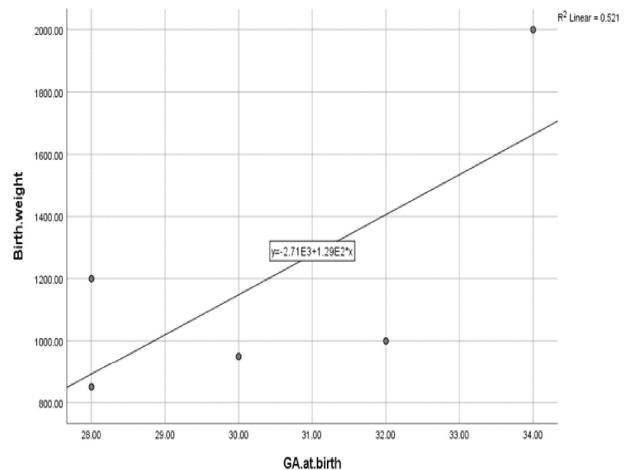


Figure 1: Pearson's correlation between Birth weight and gestational age Correlation coefficient: 0.722 (strong positive correlation) P-Value 0.169

Methods: Records of all preterm babies who became blind from ROP and were referred to our facility between 2020 and 2023 were extracted, information obtained included age at presentation, birth weight, gestational age and whether ROP screening was done. Data was analyzed using SPSS version 26 (IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp)

Results: Five (5) children were seen. Three of them were males. The mean gestational age was 30.4 ± 2.6 weeks (range 28 - 34 weeks). Mean birth weight was $1,200 \pm 465$ g (range 850 - 2000g). Mean age at presentation was 11.4 ± 7.4 months. All 5 children received neonatal care at private hospitals (Table 1). Positive correlation exists between the birth weight and gestational age (Figure 1)

Discussion: Africa has been called the new frontier of ROP blindness,¹ with an average of 2,500 preterm admissions annually in the FCT, rapidly expanding neonatal care and the grossly inadequate ROP screening services, Abuja will likely become the new frontier of ROP blindness in Nigeria.

As survival improves due to better neonatal care, the number of babies blind from ROP is likely to increase except ROP screening and treatment services also expand.

All the 5 blind children in our series received neonatal care in private hospitals and had no ROP screening. Ademola-Popoola *et al*² also found in