



PD015

Paediatric Cardiology & Congenital Heart Disease • Poster Presentation

PREVALENCE OF COMPLEX CONGENITAL HEART DISEASE IN NEONATES AT THE UNIVERSITY OF PORT HARCOURT TEACHING HOSPITAL, RIVERS STATE, NIGERIA (JANUARY 2021–DECEMBER 2025)

1) Alerechi-Ogbugo, D. J. 2) Ewuzie, A. A. 3) Chukwu, C. J. 4) Tabansi, P. N. 5) Otaigbe, B. E.

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Background: Complex congenital heart disease (CCHD) encompasses structural cardiac defects associated with significant haemodynamic compromise and carries the highest risk of early neonatal mortality without prompt intervention. Despite the Niger delta region recording disproportionately elevated congenital heart disease (CHD) prevalence rates linked to environmental teratogenic exposure, comprehensive data on complex CHD among neonates at the University of Port Harcourt Teaching Hospital (UPTH) remain limited.

Methods: A prospective cross-sectional review of medical records of neonates aged 0–28 days who underwent echocardiographic evaluation at UPTH between January 2021 and December 2025 was conducted. CCHD was defined as two or more concurrent structural defects or a single lesion requiring urgent intervention. Data were analysed using jamovi statistics version 2.7.18.

Results: of 133 neonates evaluated, 11 were diagnosed with complex CHD, yielding a prevalence of 82.7 per 1,000 neonates echocardiographed. Hypoplastic left heart syndrome (HLHS) was the commonest lesion (27.3%), followed by transposition of the great arteries (TGA) and tetralogy of Fallot (TOF). The sole neonate presenting within the first hour of life had coarctation of the aorta. CCHD was significantly associated with female sex ($p=0.003$) and syndromic features ($p=0.002$). No significant associations were found with birth order, maternal age, or environmental proximity. **Conclusion:** CCHD prevalence at UPTH exceeds comparable Nigerian figures, with HLHS, TGA, and TOF predominating. These findings highlight a critical need for structured neonatal cardiac screening and urgent development of paediatric cardiac surgical services in the Niger delta.

Keywords: complex congenital heart disease, neonates, echocardiography, Niger delta, hypoplastic left heart syndrome, Port Harcourt, Nigeria