Outcome of patients with neonatal surgical emergencies in the emergency department

Aisha Siddiqua[1*], Huma Waqar[1]
1. Child Life Foundation Karachi, Pakistan
Correspondence to: Aisha Siddiqua
*Child Life Foundation Karachi, Pakistan
Email: aayshasiddiqua4@gmail.com
DOI: 10.24911/SJEMed.12-2624

Background: Neonatal surgical emergencies have variable outcomes influenced by underlying condition, timely diagnosis, intervention, associated anomalies, and access to surgical care. In developing countries, cultural practices, delayed presentation, and limited surgical resources may worsen outcomes. A 2016 WHO report estimated that birth defects contributed to 270,000 deaths during 28days of life.

Objective: To explore factors influencing outcomes among neonates presenting with surgical emergencies, emphasizing early recognition, timely diagnosis, stabilization, referral, admission, and multidisciplinary care.

Methods: This retrospective electronic health record study was conducted at the Child Life Foundation organization over 1 year, from first June 2024 to 31 June 2025. All neonates presenting with surgical emergencies, irrespective of gender, and triaged as P1 or P2 were included. Age ranged from the first day of life to 28 days of life.

Results: A total of 1,066 neonates were included; 627 (58.8%) were males, and 439 (41.1%) were females. Diagnoses included imperforate anus 11 (1%), intestinal obstruction 250 (23.4%), omphalocele 8 (0.75%), tracheoesophageal fistula 223 (20.9%), diaphragmatic hernia 21 (1.96%), necrotizing enterocolitis 337 (31.6%), hydrocephalus 18 (1.68%), meningomyelocele 132 (12.3%), spina bifida 35 (3.2%), gastroschisis 7 (0.65%, hydrocele 6 (0.56%), inguinal hernia 5 (0.46%), anorectal malformation 3 (0.28%), Hirshsprung disease 6 (0.56%), and encephalocele 4 (0.37%). Outcomes were admission 697 (65.3%), referral 119 (11.1%), LAMA 96(9%), and expired 154 (14.4%).

Conclusion: Neonatal surgical emergencies were associated with substantial morbidity and mortality, highlighting the need for early recognition, stabilization, timely referral, surgical admission, multidisciplinary care, and appropriate resource allocation. Strengthening neonatal-friendly emergency infrastructure and ensuring appropriate use of limited resources may further improve access, treatment, and outcomes.

Keywords: Neonatal surgical emergencies, neonates, emergency department, necrotizing enterocolitis, congenital anomalies, surgical referral, neonatal mortality, multidisciplinary care.