

A Review of Congenital Malformations among Live-born Neonates at a Tertiary Care Hospital in North India

To the Editor,

There are concerns that the incidence of congenital anomalies has arisen after the onset of coronavirus infection and disease (COVID-19) pandemic which could be due to several factors including maternal fever, stress, anxiety, inadequate preconceptional, and prenatal care. A recent data extracted from the National Birth Registry in Iran described that during November 2020–February 2021, 0.58% of newborns had congenital anomalies against the 0.47% incidence during the same time period pre-COVID-19.^[1] This has been documented in Henan Province, Central China that over the years, the incidence of neural tube defects has decreased and that of congenital heart diseases has increased.^[2]

With a retrospective review of hospital data, we studied the spectrum of congenital anomalies/defects identified

among neonates admitted to our hospital between January 1, and August 31, 2022. A total of 1458 neonates were live-born during this time period. Among them, 17 (1.2%) had some congenital anomaly, a rate of 116.6 per 10,000 live births. There were an additional 11 extramural neonates with some anomaly during the same time period. There was a predisposition for male gender with male: female ratio among affected neonates being 1.5:1. Majority were born at term gestation ($n=22$; 78.6%) and 25.0% ($n = 7$) were low birth weight <2500 g. The most common organ system involved was cardiovascular system (34%), followed by neurospine (17%) and musculoskeletal system (17%) [Figure 1]. The spectrum of congenital anomalies identified are presented in Table 1. There was one neonatal mortality among these 28 neonates, due to hypoplastic left heart syndrome.

The incidence of congenital anomalies among live-born neonates in our region (1.2%) is comparable to the pre-COVID-19 hospital-based published Indian data of 1.6%–1.7% from Pune and Shimla.^[3,4] Similar to these abovementioned datasets,^[3,4] we too recorded maximum (36.7%) contribution from congenital heart diseases and a relatively lower contribution from nervous system anomalies like neural tube defects. The limitation of these findings is that this is a retrospective review in which some of the cases with minor malformations could have missed mapping. This suggests the need of maintaining an effective surveillance system.

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Conflicts of interest

There are no conflicts of interest.

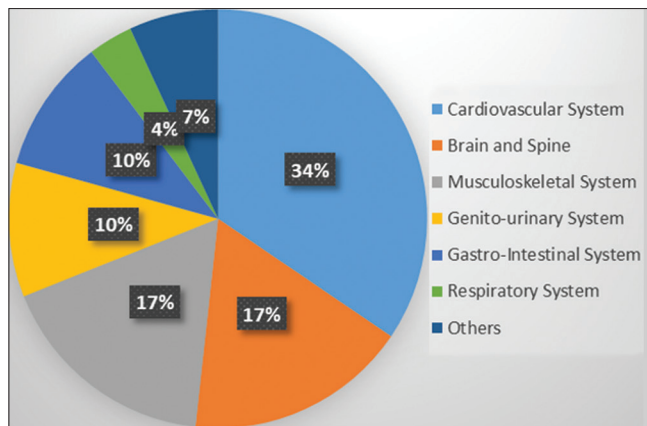


Figure 1: Pattern of organ system involvement

Table 1: System-wise spectrum of congenital anomalies

System involved	Congenital defect/anomaly	Frequency (%)
Cardiovascular system	Acyanotic heart disease	9 (31.0)
	Cyanotic heart disease	1 (3.4)
Brain and spine	Neural tube defect (meningocele, thoracolumbar rachischisis)	2 (6.9)
	Hydrocephalus (congenital aqueductal stenosis, Dandy–Walker malformation)	2 (6.9)
	Sacroccygeal teratoma	1 (3.4)
Musculoskeletal system	Polydactyly	4 (13.8)
	Genu recurvatum	1 (3.4)
Genito-urinary system	Hypospadias	3 (10.3)
Gastro-intestinal system	Anorectal malformation (analatresia)	1 (3.4)
	Orofacial cleft	2 (6.9)
Respiratory system	Laryngomalacia	1 (3.4)
Others	Aplasia cutis congenita	1 (3.4)
	Trisomy 21	1 (3.4)

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