

ORIGINAL ARTICLE

FREQUENCY AND PATTERN OF MUSCULOSKELETAL LIMB DEFECTS AMONG CHILDREN IN PESHAWAR DISTRICTAqsa¹, Inayat Ullah², Aqsa Khan¹, Muhammad Ali Khan¹, Rida¹, Bakht Beland³**ABSTRACT**

Introduction: Congenital defects are structural, behavioral, metabolic, and functional disorders present at the time of birth. However, the symptoms of some of these defects may not be clear until late childhood or adulthood. It consists of different categories of disorders, malformations, deformities, and association syndrome. This disorder is common from genetic anomalies and disregard for the developing fetus. The different prevalence of this disorder can be explained by racial, ethnic, socio-cultural, and economic differences between different countries.

Material & Methods: This study was a retrospective cross-sectional study. The secondary data was collected from the LRH and AKI. The sampling technique used in this study was convenience sampling. 5175 cases were recruited in this study. The sample size was not applicable because of the secondary data. The data was organized into a spreadsheet based on the type of variable using the Excel program and analyzed using the statistical package for social sciences (SPSS).

Results: The overall frequency of congenital MSK limb defects was 157 per 5175 cases. Males were more affected 104(66.2%) than the females 53(33.8%) in the given data. Lower limb defects were more common than upper limb defects. Among the pattern of congenital limb defects, congenital talipes equinovarus was the most frequent defect observed and males were more affected as compared to females.

Conclusion: The current study concluded that Frequencies of congenital musculoskeletal limb defects were observed in 157 of 5175 live births in Peshawar district during 2015-2017.

Keywords: Computer Users, Neck Pain, Prevalence, Undergraduate Students

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INTRODUCTION

Congenital defects are structural, behavioral, metabolic, and functional disorders present at the time of birth.¹ However, The symptoms of some of these defects may not be clear until late childhood or adulthood. It consists of different categories of disorders, malformations, deformities, and association

syndrome.² This disorder is common from genetic anomalies and disregard for the developing fetus. About 2-3% of births are associated with primary limb anomalies diagnosed or shortly after birth.³ 2-3% is revealed at the age of 5 years.⁴ Dastgiri et al.⁵ It is reported that in Glasgow in 18 years are

considered congenital anomalies prevalence of 324/10000 births, the most common, abnormalities of the limbs and digestion System anomalies. In Canada, 2-3% of 350,000 children every year will be delivered with a serious congenital defect.⁶ Tomatir et al.⁷

The different prevalence of this disorder can be explained by racial, ethnic, socio-cultural, and economic differences between different countries. There are no local data in Nigeria on the occurrence of this anomaly. Sunday-Adeoye et al.⁸ in delta state. Nigeria in a retrospective study reported an incidence of External congenital anomaly 110.8 / 10.000 live birth.⁹ The abnormality of the musculoskeletal system is the most common and therefore anomalies of the central nervous system.¹⁰

MATERIAL AND METHODS

All patients with congenital defects reporting at AKI, LRH between September 2015 to September 2017 were included in this cross-sectional study. Patient reporting before September 2015 and after September 2017, defects and disorders come at the time of delivery or after delivery, Children with only minor congenital limb defects, such as clinodactyly, camptodactyly, brachydactyly of the fourth and fifth fingers, trigger finger, were excluded in this study. A convenience sampling technique was used for the recruitment of data. The sample size was not applicable because of the secondary data. The dependent variable of this research is the type of congenital malformation and the neonatal variables (gender, gestational age). The Independent variables of this study were demographic factors (mother's age, residency, place of labor, disability in family). The data was organized into a spreadsheet based on the type of variable using the Excel program and analyzed using the statistical package for social sciences (SPSS).

RESULTS

In this study, Frequencies of congenital musculoskeletal limb defects were observed in 157 of 5175 live births in Peshawar district during 2015-2017. Males were affected more than the females. According to pattern of the congenital musculoskeletal limb defects congenital talipes equinovarus was the most common limb defect. The results show that the majority of the mothers 124 (79.0%) were

within the 15-20 years category followed by 32 (20.4%) who were within the 21-25 years category. Only 1(.6%) fell within the above 25 years. Childrens 14(8.9%) had congenital disability in family were as 143(91.1%) had no such disabilities in family and majority of the child 155(98.7%) were full term babies. Only 2(1.3%) fell within premature category. In table cross tabulation shows that out of 104 male 54 males had congenital talipes equinovarus whereas out of 53 females 27 were reporting CTEV.

DISCUSSION

This study is supported by different studies which shows that the musculoskeletal system is the most frequent system reported as Peter G. Alexander et al (2016) found that the abnormalities of the limbs are the most important and frequently reported structural defects and structural congenital defects, examining the prenatal effects of environmental factors and birth defects in the limbs.¹¹ The same results of Jin-ping zhao et al (2015) indicated that musculoskeletal anomalies (12.6) were the most common through a research "Regional variations in the prevalence of major congenital malformations in Quebec: the importance of fetal growth environment" by using data from the Quebec pregnancy cohort.¹²

The overall frequency of musculoskeletal limb defects during the study period from 2015 to 2018 was 157 per 5175 patients. Among those the most frequent limb defect was CTEV this is similar to the findings of Anne George cherian et al (2016) research on the prevalence of congenital anomalies in mid-sized hospitals in southern India.¹³ It was a descriptive cross section study that used the birth data and clinical records available. It has been shown that musculoskeletal system is the most common anomaly occurs where the most common talipes equinovarus, constituted 73.6% of the musculoskeletal system.¹⁴ This raises the incident from CTEV to 3 per 1,000 live births. Of these, with CTEV, 54% were men, compared with 46% who were women.¹⁵ The limitations of the current research study were the non-probability sampling technique used and the descriptive cross-sectional study design which only determine frequency and distribution of the outcome. Furthermore, because our questionnaire is self-reported, there is a chance of recollection bias.

Furthermore, because the population of this study is limited to undergraduate students at Khyber Medical University, the findings cannot be extended to the wider community.

CONCLUSION

The researchers determined the prevalence of 157 children with congenital limb defects for 5175 cases in the Peshawar district after corrective procedures, which made this indicator fairly reliable. The declining tendencies observed in polydactyly and flat feet in 2015-2017 may be obvious or result from the registration of artifacts. A relatively higher number of birth defects have been found in the Peshawar district. The high prevalence for CTEV and arthrogyrosis may be partly related to progress in clinical management and the diagnosis of more frequent birth defects.

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Congenital talipes equinovarus * what is the gender of child? Cross tabulation Count

		what is the gender of child?			Total
		Male	female		
congenital talipes equinovarus	Yes	54	27	81	
	No	50	26	76	
Total		104	53	157	

