Trends & clinical outcomes of pediatric measles cases over 3 years. A retrospective review from a tertiary care facility in Sindh

Wahida Latif [1*], Zareen Qasmi[2], Tayyaba Ali[2]

1. Senior Physician In-Charge, Department of Pediatric Emergency, Dr Ruth K M Pfau Civil Hospital Karachi, Childlife Foundation, Karachi, Pakistan
2. Department of Clinical Affairs, Childlife Foundation, Karachi, Pakistan

Correspondence to: Wahida Latif

*Senior Physician In-Charge, Department of Pediatric Emergency, Dr Ruth K M Pfau Civil Hospital, Karachi, Childlife Foundation, Karachi, Pakistan.

Email: wahida.lateef@childlifefoundation.org

DOI: XXX

Introduction: Measles is a contagious airborne disease that is vaccine-preventable. Measles Rubella vaccine is included in the extended programme of immunization in Pakistan with administration of two doses at 9 and 15 months of age. It remains a menace for children, causing complications and even death in infected patients.

Objective: The objective of this study is to analyse the cases of measles presenting in the paediatric emergency department of Dr Ruth K M Pfau Civil Hospital, Karachi.

Method: It is a retrospective analysis of 3 years of data from May 22 to April 25 of patients who visited the emergency department and were clinically diagnosed with measles. The study includes all patients from 1 month to 13 years, categorized as P1, P2, and P3 according to the World Health Organization Emergency Triage Assessment and Treatment triage system. The demographic and clinical data were retrieved from the Electronic Medical Records of the patients maintained by the Childlife Foundation.

Result: A total of 195,861 patients visited the Pediatric Emergency Department during the study period. Of these, 2,134 (1.08%) were diagnosed with measles, and 67% (*n* = 1,432) were categorized as P1. Gender distribution was balanced, with 53.23% males and 46.77% females. The most affected age group was 1-5 years, accounting for 59.79% (*n* = 1,276) of cases. Vaccination status showed that 58.58% (*n* = 1,250) were completely vaccinated up to 9 months of age, while 19.40% had incomplete vaccination status, and 5.95% were unvaccinated. Most patients had a length of stay between 4 and 10 hours (36.55%). Measles-related complications occurred in 77.55% (*n* = 1,655) of patients; 16.07% developed pneumonia, and 6.37% encephalitis. Discharge data showed that 34.68% were discharged home, while 22.59% left against medical advice. Sixteen patients died, and six were brought in with out-of-hospital cardiac arrest. Measles cases increased during the last 2 years, from 26% (*n* = 557) in May 2022-April 2023 to 37.35% and 36.5% in the subsequent years.

Conclusion: The study concluded that, like global trends, there is a surge in measles cases in the last 2 years of the study period. Incomplete vaccination was identified as a substantial risk factor contributing to the burden of measles patients, with many patients presenting with severe complications like pneumonia and encephalitis.

Keywords: Measles, pediatric emergency.

Conflict of interests: The authors declare that there is no conflict of interest regarding the publication of this abstract.

Funding: None.

Consent to participate: Not applicable.

Consent for publication: Not applicable.

Ethical approval: Approved by the ORC (organization review committee) of Childlife Foundation.