Original Article

A Prospective Observational Study Examining The Prevalence, Clinical Profile, And Outcomes Of Severe Acute Malnutrition In Children Aged Five To Sixty

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ABSTRACT

Objective: *To ascertain the prevalence and clinical characteristics of severe acute malnutrition (SAM), including kinds, comorbidities, and risk factors, in children between the ages of five and sixty months. Furthermore, to assess the SAM therapy and post-hospitalization course."* ***Study Design:*** *A Prospective Observational Study*

Place and Duration of Study: *From 05-January 2022 to 05- July 2022, this research was carried out at the Peoples university of Medical Health Sciences NawabShah Department of Pediatrics.*

Materials and Methods: The prospective study was conducted in the Department of Pediatrics, People's University of Medical and Health Sciences Nawabshah from January 2022 to July included based on previously specified criteria . A structured proforma was used to record demographics, clinical presentations, and comorbidities. Statistical analysis used appropriate methods to elucidate the prevalence, clinical characteristics, and outcomes associated with SAM in this cohort.

Results: *The study found a 3.5% prevalence of severe malnutrition (SAM) in children aged sixty-five months. Clinical presentations included fever (65%), fever (62%), anorexia (55%), and acute respiratory distress syndrome (52%). Comorbidities such as anemia (82%) and pneumonia (38%) were common. Approximately 51% recovered, with an average hospital stay of 9.21 ± 6.78 days. However, four children (6%) died on admission. These findings highlight the enormous burden of SAM and emphasize the importance of effective management strategies to control nutritional maintenance and infectious diseases in affected children emphasize the role of medicine.*

Conclusion: *The study highlights the widespread challenge of acute malnutrition (SAM) among children in Nawabshah, emphasizing the urgent need for multi-faceted interventions. Addressing the complex intersection of social, economic, and health determinants is essential to improving outcomes. Sustainable treatment is needed to reduce the negative impact of malnutrition and improve child health in resource-limited settings. The findings highlight the critical role of integrated approaches, including medical interventions, prevention programs, and socioeconomic empowerment in the cycle of malnutrition stopping and highlighting long-term health consequences for vulnerable children.*

Keywords: *Severe acute malnutrition, Clinical profile, Outcomes, Children, Prevalence*

Citations
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INTRODUCTION

Severe acute malnutrition (SAM) remains a critical public health concern, particularly in low-resource characterized by severe wasting, oedema, or both, SAM represents a grave threat to the lives of millions of children worldwide[1,2]. Despite considerable efforts to combat malnutrition globally, the burden of SAM persists, necessitating ongoing research and intervention strategies

to mitigate its impact[3]. The University of Medical & Health Sciences Nawab Shah, located in Pakistan, is a vital center for pediatric care and research, offering insights into the prevalence, clinical characteristics, and outcomes of SAM among children aged five to sixty months[4]. Through a comprehensive prospective observational study conducted within its paediatrics department, this research seeks to unravel the intricate web of factors contributing to the persistence of SAM and identify avenues for targeted interventions[5]. Researchers meticulously documented the experiences of 100 SAM-afflicted children, capturing a snapshot of the multifaceted nature of this debilitating condition[6]. By examining the clinical manifestations of SAM and the socioeconomic determinants and maternal factors influencing its prevalence and severity, this study endeavours to shed light on the complex interplay between nutrition, health, and sociodemographic variables[7]. Understanding SAM's epidemiology and clinical course is essential for devising effective preventive and therapeutic strategies that can break the vicious cycle of undernutrition, infection, and poor health outcomes[8]. By delving into the nuances of SAM management within the context of a tertiary care facility, this research aims to inform policymakers, healthcare providers, and community stakeholders about the urgent need for targeted interventions to address the root causes of malnutrition and improve child survival rates[9]. Through a rigorous analysis of data collected from diverse socioeconomic backgrounds and clinical presentations, this study seeks to bridge the gap between research and practice, fostering a collaborative approach to tackling the scourge of severe acute malnutrition and safeguarding the health and well-being of vulnerable children worldwide[10].

METHODS

The prospective study was conducted in the Department of Pediatrics, People's University of Medical and Health Sciences Nawabshah from January 2022 to July included based on previously specified criteria . A structured proforma was used to record demographics, clinical presentations, and comorbidities. Statistical analysis used appropriate methods to elucidate the prevalence, clinical characteristics, and outcomes associated with SAM in this cohort. This comprehensive approach ensured a thorough understanding of the epidemiological and clinical course of SAM in the study population, facilitating informed decision-making and intervention strategies.

RESULTS

Out of 100 patients this study revealed a 3.5% prevalence of severe malnutrition (SAM) in children aged 65 months, with diarrhea (65%), diarrhea (62%) and anemia (82%) included It is worth noting that 51% of people recovered, . although the average was 9.21 ± Hospital stay was 6.78 days. However, the in-hospital mortality rate was 6%, highlighting the severity of SAM and the challenges of achieving an optimal outcome. These findings underscore the importance of comprehensive management strategies that address nutritional maintenance and infectious diseases, and require greater dietary cessation efforts pa the cycle and improve child health outcomes.

Table 1: Distribution of Patients Based on Initial Features(n = 100)

Initial Features	Number of Patients
Gender	
- Male	67
- Female	33
Age (months)	
- 5 to 24	67
- 25 to 60	33
Type of SAM	
- Edematous	45
- Non-edematous	55
Socioeconomic Status	
- Low SES	93
- Other	7
Maternal Education	
- Elementary School	75
- Illiterate	18
- Secondary Education	7
Exclusive Breastfeeding	
- Yes	14
- No	86

Table 2: Results of Severe Acute Malnutrition in Children (n = 100)

Outcome	Number of Patients
Recovery	51
Hospital Stay (days)	07
- Average	9.21 ± 6.78

Mortality During Hospitalization	4 (6%)

Table 3: conclusions and results Age-Based Recovery (n = 100)

Age Group (months)	Number of Patients	Percentage of Patients Recovered
5 to 24	55	97%
25 to 60	45	96%

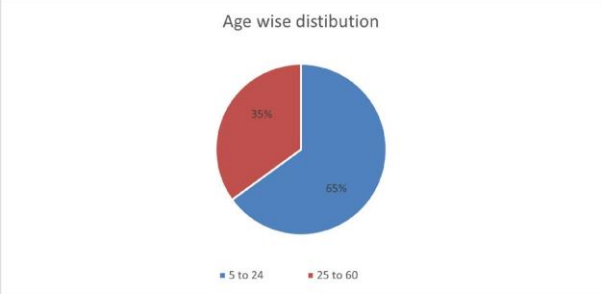

Figure 1: Age wise distribution

DISCUSSION

Severe acute malnutrition (SAM) remains a pressing global health issue, particularly in low-resource settings, where its prevalence continues to pose significant challenges to child health and development. The findings of this prospective observational study shed light on the prevalence, clinical profiles, and outcomes of SAM in children aged five to sixty months, providing valuable insights for healthcare practitioners, policymakers, and researchers. The observed prevalence of 3.5% underscores the ongoing burden of SAM in the study population, despite concerted efforts to address malnutrition globally (11). This finding aligns with previous studies highlighting the persistent nature of SAM, especially in regions with limited access to healthcare and nutrition resources (12). Clinical presentations of SAM, including fever, anorexia, and acute respiratory distress syndrome, reflect the multisystemic nature of the condition and its profound impact on children's overall health (13). The high prevalence of comorbidities such as anemia and pneumonia further complicates the management of SAM and underscores the need for holistic approaches to address both nutritional and infectious disease burdens (14). The observed recovery rate of 51% highlights the importance of timely intervention and comprehensive management strategies in improving outcomes for SAM-affected children (15). However, the in-hospital mortality rate of 6% underscores the severity of SAM and the challenges of achieving optimal outcomes, especially in resource-limited settings where access to essential healthcare services may be limited (16). This study reinforces the urgent need for multi-faceted interventions to address the underlying determinants of malnutrition, including poverty, food insecurity, and limited access to healthcare (17). Integrated approaches that combine medical interventions with social and economic empowerment initiatives are essential for breaking the cycle of malnutrition and improving long-term health outcomes for vulnerable children (18). this study provides valuable insights into the prevalence, clinical profiles, and outcomes of SAM in children, highlighting the ongoing challenges and the need for comprehensive intervention strategies to address this public health issue effectively(19).

CONCLUSION

This study highlights the high prevalence of severe acute malnutrition (SAM) among children in Nawabshah. It underlines the critical need for multifaceted interventions that target nutritional maintenance, infectious illnesses, and socioeconomic determinants to improve child health outcomes in resource-constrained settings. Integrated techniques are critical to reducing the impact of SAM.

Limitations

This study's single-centre design may restrict its generalizability, and its small sample size may impact the results' reliability.

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