

INFECTION-ASSOCIATED HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS IN PEDIATRIC PATIENTS AND FACTORS THAT INFLUENCE ITS PROGNOSIS: A SINGLE TERTIARY CENTER EXPERIENCE

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INTRODUCTION

- Hemophagocytic Lymphohistiocytosis (HLH) is a hyperinflammatory disease characterized by uncontrolled cytokine storm. It is often the result of an underlying inflammatory disease with or without a recognized trigger (often infectious).
- Only two studies on HLH have been published in the Philippines and none specifically on infections associated with HLH.
- This study determined the association of infections, sociodemographic-clinical profile, management and complications to mortality of Hemophagocytic Lymphohistiocytosis in children in a tertiary government hospital.

METHODOLOGY

This was a retrospective analytical study of children with infection-associated Hemophagocytic Lymphohistiocytosis admitted from January 2004 to May 2023. Descriptive and simple logistic regression analysis was used during the analysis.

RESULTS

- There were 64 children with infection-associated HLH. The median age is 6 years, 64% were males, and 50% died.

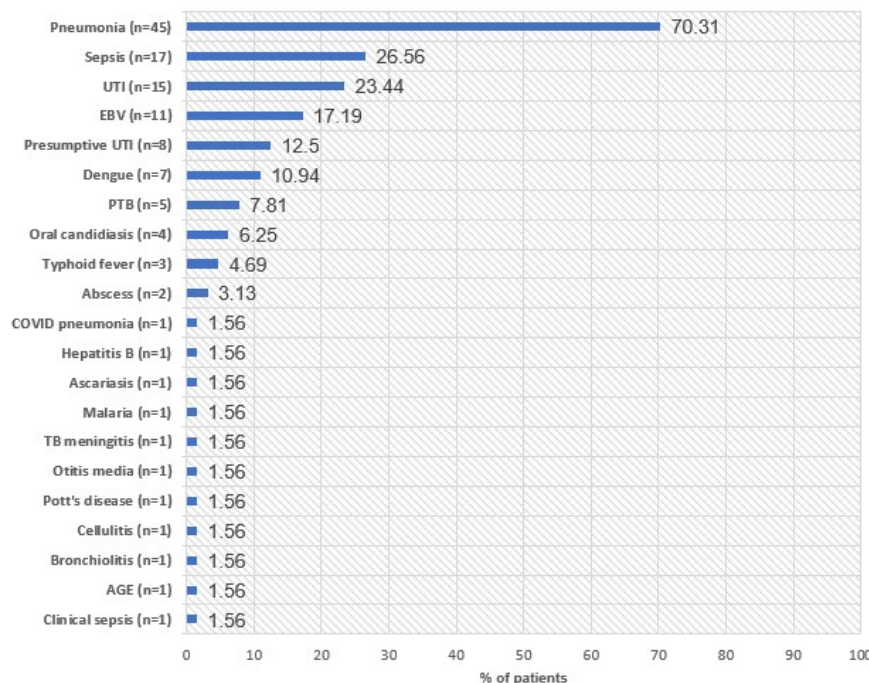


Figure 1. Distribution of specific infections among HLH patients (n=64)

- The odds of non-survival were higher among children with jaundice (OR 4.2, 95% CI 1.48-11.94), edema (4.33, 95% CI 1.41-13.36), bleeding (OR 4.38, 95% CI 1.51-12.74), pallor (OR 3.86, 95% CI 1.33-11.16), cervical lymphadenopathy (OR 2.90, 95% CI 1.03-8.17), DOB/respiratory distress (OR 15, 95% CI 3.06-73.58), thrombocytopenia (OR 10.33, 95% CI 1.21-88.36), elevated INR (OR 5.75, 1.52-21.73), and hyponatremia (OR 8.16, 95% CI 1.57-42.44).

- Moreover, for every 1 umol/L increase in direct bilirubin, the odds of mortality increased by 1%. While for every 1g/L increase in hemoglobin, platelet and albumin the odds of mortality decreased.
- There was no enough evidence to show that there is an association between age, sex, nutritional status, residence, management given with p-value > 0.05.

DISCUSSION

- The infections associated with HLH in pediatric population can include viral, bacterial, fungal and parasitic infections, thus it is essential to have a high index of suspicion in patients who are severely ill especially since the signs and symptoms of HLH are similar to sepsis.
- Future prospective studies with larger sample size are needed to conduct a multivariable analysis exploring the factors associated with mortality.

KEY WORDS

children, infection, hemophagocytic lymphohistiocytosis