

From terrible to terrifying: Malignant pertussis in Sandakan

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ABSTRACT

Introduction: Pertussis is a vaccine-preventable disease with an infant mortality rate of 7.2%. In 2023, Sabah reported the highest case of mortality frequently attributed to malignant pertussis, a subset of pertussis that is terribly fatal. We reviewed 6 cases of malignant pertussis with an infant mortality rate of 75%. **Case Description:** Six patients meeting the inclusion criteria for malignant pertussis were identified; four infants <5 months old, and two 1-year-olds. They are either unimmunized or under-vaccinated for their age. Four of them presented with neurological symptoms associated with cough. Hyperleukocytosis >50 G/L were reported in all of them. Two infants died within three days while the third infant succumbed on Day 10 after developing pulmonary hypertension & ARDS. The only living infant in the group underwent leukoreduction therapy on Day 3 and survived. The remaining two pediatric patients had an uncomplicated admission and were discharged on Day 10. **Conclusion:** Malignant pertussis (MP) typically affects infants <5 months of age and is characterized by acute respiratory distress with tachycardia & hyperleukocytosis that is predominantly lymphocytes. Complications include pulmonary hypertension, ARDS & multiorgan failure leading to death. A high white blood cell (WBC) count is attributed to the high fatality rate hence early leukoreduction therapy is advocated. The antimicrobial role is limited. The outcome remains poor despite an aggressive ventilation strategy. Malignant Pertussis should be considered in infants presenting with cough, neurologic symptoms and hyperleukocytosis >50 G/L, especially in an endemic region with low vaccination coverage such as Sabah. Early leukoreduction therapy may improve prognosis.