

Hematological complications in children hospitalized for varicella infection

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As a part of national varicella hospitalization study in children (VARICOMP), we aim to evaluate hematological complications in children requiring hospitalization. Twenty-eight health care centers (including university hospitals, maternity and children's hospitals and state hospitals) agreed to participate in the VARICOMP study and these centers in 14 cities serve 50% of the children population in Turkey. Between the time period October 2008-October 2012, 1939 children hospitalized due to varicella infection in Turkey, among them 95 (4.8%; mean age 62.7 ± 42.7 months, 46 boys, 49 girls) have hematological complications. 11 children were under 1 year of age (11.6%). Two children had been vaccinated with one dose of live attenuated varicella vaccine. In the entire study group, 45 children (47%) had an immunosuppressive condition or chronic underlying disease, whereas 50 children (53%) were previously healthy. Hematological complications of the hospitalized children are: anemia (n=11, two out of them hemolytic anemia), thrombocytopenia (n=36), bicytopenia (n=6), neutropenia (n=6), pancytopenia (n=1), febrile neutropenia (n=16), secondary hemophagocytic lymphohistiocytosis due to varicella (n=3), and disseminated intravascular coagulation (n=2). Two children required treatment in the pediatric intensive care unit, and both required mechanical ventilation. The median length of hospital stay was 6 days. Mortality was not observed. 78 cases have been received acyclovir (78%, mean duration 8.1 ± 3.9 days), 48 received antibiotics (50.5%) and 15 patients received IVIG (15.8%). Hematological complications are one of the causes of hospitalization in healthy children as well as children with underlying diseases. Complications severity varies from mild as isolated thrombocytopenia to moderate to severe as febrile neutropenia, HLH and DIC. Live varicella vaccines are contraindicated in children with hematological oncological malignancies and immune deficiencies. Routine universal immunization is the main prevention strategies against disease burden in community.

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