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Parvovirus B19 in patients of acute lymphoblastic leukemia with prolonged cytopenia

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Introduction: Parvovirus B19 is a small DNA virus and an important cause of cytopenia(s) and suppressed erythropoiesis. It is known to replicate exclusively in erythroid progenitor cells and also known to cause suppression of megakaryocytic colonies. Persistent B19 infection tends to occur in hematological malignancies. The aim of the study was to find the frequency of parvovirus b19 infection in patients with Acute Lymphoblastic Leukemia (ALL) with prolonged cytopenia.

Method: 49 patients suffering from ALL were enrolled for the study. All patients had persistent prolonged cytopenia for greater than 10 days beyond the scheduled date of next chemotherapy. B19 infection was investigated by detection of viral DNA in serum by Real time PCR.

Result: Among the 49 patients enrolled with ALL only 6 (12.2%) were found to be Parvovirus B19 DNA positive. The infection was not suspected on clinical grounds on any of the patients. Most of the patients were males (40 male and 9 females). All the patients were cytopenic with anemia, thrombocytopenia or neutropenia.

Conclusion: We concluded that patients with ALL are at particular risk of persistent B19 infection. Moreover, it is important to consider B19 infection as a possible cause of unexplained cytopenia(s) in these patients. Thus, screening for parvovirus B19 DNA by quantitative polymerase chain reaction in cytopenic patients with ALL is suggested. Moreover, it is important to consider B19 infection as a possible cause of unexplained cytopenia(s) in these patients. Thus, screening for parvovirus B19 DNA by quantitative polymerase chain reaction in cytopenic patients with ALL is suggested.

Biography

Omer Naseem from FMH College of Medicine and Dentistry has completed his House job from Jinnah Hospital, Lahore, Pakistan. He has worked with GIZ; an NGO of international repute on safe blood transfusion project where he was involved in inspections of blood bank practices and working to enhance the safety measures involved in blood banking in Pakistan. He is currently pursuing his MPhil in Hematology at University of Health Sciences Lahore, Pakistan.

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