

# Peripheral Blood Examination Findings in SARS-CoV-2 Infection in Pediatric Patients

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## Abstract

**Background** The findings of peripheral blood examination (PBE) in SARS-CoV2 infection in pediatrics patients have not been fully described, the reports have been done on the adult population so far. In this study we showed the characteristics in the PBE in SARS-CoV2 infection in the pediatric population. **Methods** Descriptive, observational, longitudinal, prospective study. Information from the medical records of pediatric patients < 17 years of age with a diagnosis of SARS-COV-2 (positive PCR test) was analyzed and peripheral blood smear examination was performed. **Results** 16 pediatric patients with a diagnosis of SARS-CoV-2 /COVID-19 were evaluated. 100% of the patients had PBE done, 62.50% (10/16) had no morphological alteration of the erythroid cell line, the erythroid changes were: anisocytosis and echinocytosis in 12.5% (2/16), in white cell line a predominance of plasmacyte lymphocytes was found in 37.5% (6/16), followed by hyposegmented neutrophils “Pelger-Huet anomaly” 31.25% (5/16), hypersegmented neutrophils 12.5% (2/16) , atypical lymphocytes 18.75% (3/16), granular lymphocytes in 6.25% (1/16), prolymphocytes in 6.25% (1/16), hyposegmented eosinophils in 12.5% (2/16). **Conclusion** Plasmacytoid lymphocytes and large granular lymphocyte are seen more frequently in pediatric patients with COVID-19. Abnormalities in the neutrophils with acquired Pelger-Huët anomaly (APHA) were important findings in pediatric patients with COVID-19.

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Figure 1A

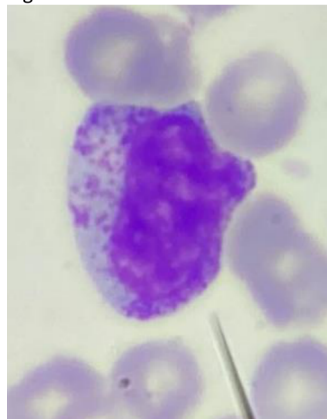


Figure 1B

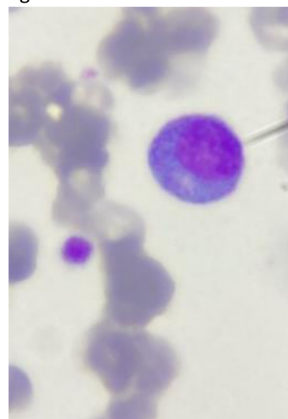


Figure 1C

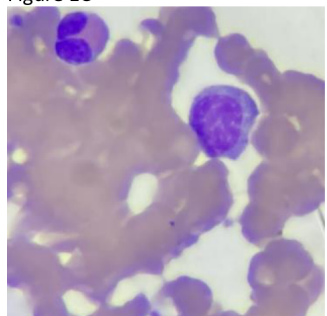
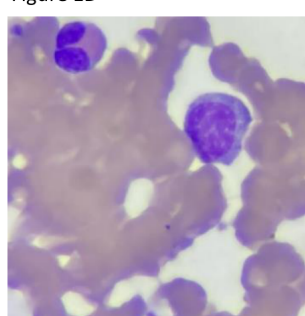


Figure 1D



**Image 1.** Morphologic findings in peripheral blood smears in patients with coronavirus disease (Wright stain,  $\times 100$ ). **A-B**, Large granular lymphocyte. **C**, Downey type III lymphocyte. **D**, Pelger- Huet anomaly.