

MORPHOLOGICAL ALTERATIONS IN ERYTHROCYTES AMONG CHILDREN WITH COVID 19 ASSOCIATED ANEMIA

Bellanage Tharushi Vihanga¹, Saloni Rajeshkumar Gohil²

Grodno state medical university¹,
National Health Service Trust Worker (London, United Kingdom)²

Научный руководитель: ст. препод. Руссу М. В.

Introduction. Coronavirus disease 2019 (COVID-19) is commonly caused by contamination from the severe acute respiratory syndrome coronavirus 2 (SARS-COV-2). The majority of COVID-19 patients will experience conserved lung gas volume and an unusual type of acute distress respiratory syndrome (ARDS) [1] Anemia lowers the amount of oxygen that reaches the tissue, which may be a major factor in the progression of multiple organ failure. Thus, it is essential to comprehend the relationship between anemia, iron metabolism, and the advancement of COVID-19, as well as if these relationships vary depending on the children's age [2].

Aim of the study. To demonstrate the morphological alterations in red blood cells among children with COVID-19 related anemia across various age groups.

Materials and methods. A case series analysis is carried out using data from case records of COVID 19 pediatric patients who had anemia in Grodno Regional Children's Clinical Hospital in the 2021-2022 years. The study was conducted based on hemogram analysis of 65 patients. Red blood cell count (RBC), hemoglobin level, mean corpuscular hemoglobin concentration (MCHC), mean corpuscular hemoglobin (MCH), and mean corpuscular volume (MCV) have been investigated. In addition to that etiology, severity, and colour index were also assessed. All parameters were examined in three primary age groups -below one year, one to five years, and six to eleven years. The analysis of the obtained information was performed using the Microsoft Office Excel 2010.

Results and discussion. There were 30 patients below 1 year old (17males and 13 females). Patients' average red blood cell count= 4.05×10^{12} . SD=0.96. Average hemoglobin level was 108.09(g/l), SD=24.48. Patients' average value of MCV=82.25fl, SD=11.99. Patient's average value of MCH=27.85pg, SD=4.85. Average value of MCHC below 1 year age group is 328.1g/dl, SD=53.03.

Patients between 1-5 years old average red blood cell count= 3.65×10^{12} Average hemoglobin level was 102.27(g/l). SD=11.3. Patients' average value of MCV=75.63fL, SD=6.29. MCHC average value 314.67g/dl. SD=9.15. MCH average value 22.95 pg. SD=3.50.

In the third age group we considered about patients above 6 years old. Patients' average red blood cell count= 4.29×10^{12} . Almost all were having normal red blood cell count. Average hemoglobin level was 115(g/l), SD=10.24. MCV average

value=79.74fL, SD=6.62. MCH average value=27.05pg, SD=2.63. MCHC average value 339.71g/dl, SD=12.66.

Conclusion. The majority of patients in all age categories had mild hypochromic anemia.

Both hypochromic and normochromic anemia were equally prevalent in patients between the ages of 1 and 5 years.

According to the data analysis third age group patients had mild severity hypochromic anemia with no significant alterations to the morphological characteristics of red blood cells.

ЛИТЕРАТУРА

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TOTAL VASCULAR ISOLATION IN SEGMENTAL LIVER RESECTION FOR ECHINOCOCCAL CYST

**Dambura Hevage Tharushi Malshani,
Aparekka Gamage Lithmi Viboda**

Grodno state medical university

Научный руководитель: PhD in M Belyuk K. S.

Introduction. Echinococcal disease is widespread in many countries of the world. According to some estimates, more than 1 million people in the world are currently affected by echinococcosis, and the incidence in some endemic and non-endemic regions varies more than 200 times. In the last decade, there has been an increase in the incidence of echinococcosis and the expansion of the geographical boundaries of the disease [1].

Aim of the study. Improve the results of surgical treatment of patients with echinococcal liver cysts.

Materials and methods. The article presents the results of surgical treatment of two patients who underwent segmental resections of the liver for echinococcosis using the technique of total vascular isolation. Patients were admitted to the Department of Surgical Pancreatology, Hepatology and Transplantation of Grodno