VITAMIN D STATUS IN PATIENTS WITH HELICOBACTER PYLORI-POSITIVE CHRONIC GASTRITIS

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Relevance: Helicobacter pylori infection is a key trigger for the development of chronic gastritis and carcinogenesis. The effectiveness of standard therapy is declining due to increasing antibiotic resistance, necessitating the search for new pathogenic targets. Vitamin D has pronounced immunomodulatory and anti-Helicobacter effects through the activation of protective mucosal peptides.

Purpose: To assess the level of vitamin D in the body by the level of 25(OH)D in the blood plasma in patients with Helicobacter pylori-positive chronic gastritis.

Research methods: The study involved 23 patients with Helicobacter pylori-positive chronic gastritis. The average age of this patients was 42 (27; 63). The data were analyzed by the e-Doctor program at the State Healthcare Institution "Grodno City Clinical Polyclinic No. 6". We analyzed: the esophagogastroduodenoscopy (EGD) findings, histological presentation, the test results for Helicobacter pylori, vitamin D level – 25(OH)D, complete blood count (CBC) parameters: hemoglobin (HGB), red blood cells (RBC), white blood cells (WBC), erythrocyte sedimentation rate (ESR).The vitamin D status was assessed by the level of 25(OH)D in blood plasma, which corresponds to the optimal level of vitamin D as 25(OH)D > 30 ng/ml, while insufficiency is 29-20 ng/ml and deficiency is <20 ng/ml. We performed statistical analysis by using program "STATISTICA 10.0".

Results: Histological analysis revealed chronic gastritis with intestinal metaplasia in one patient (4.3%). Complete blood count (CBC) results were as follows: Hb 129 (124; 137) g/L, RBC 4.36 (4.31; 4.70) × 10^{12}/L, WBC 5.9 (5.2; 6.7) × 10^{9}/L, and ESR 10 (5; 15) mm/hr.

The level of 25(OH)D in the blood plasma of patients with Helicobacter pylori-positive chronic gastritis was 17,4 (14,3; 20,3) ng/ml and corresponded to vitamin D deficiency in 73,9% (n=17) and insufficiency in 17,4% (n=4) of those examined. Only 8.7% (n=2) of the patients had an optimal vitamin D level. We found a negative relationship between plasma 25(OH)D levels and the WBC count ($r = -0.75$, $p = 0.04$).

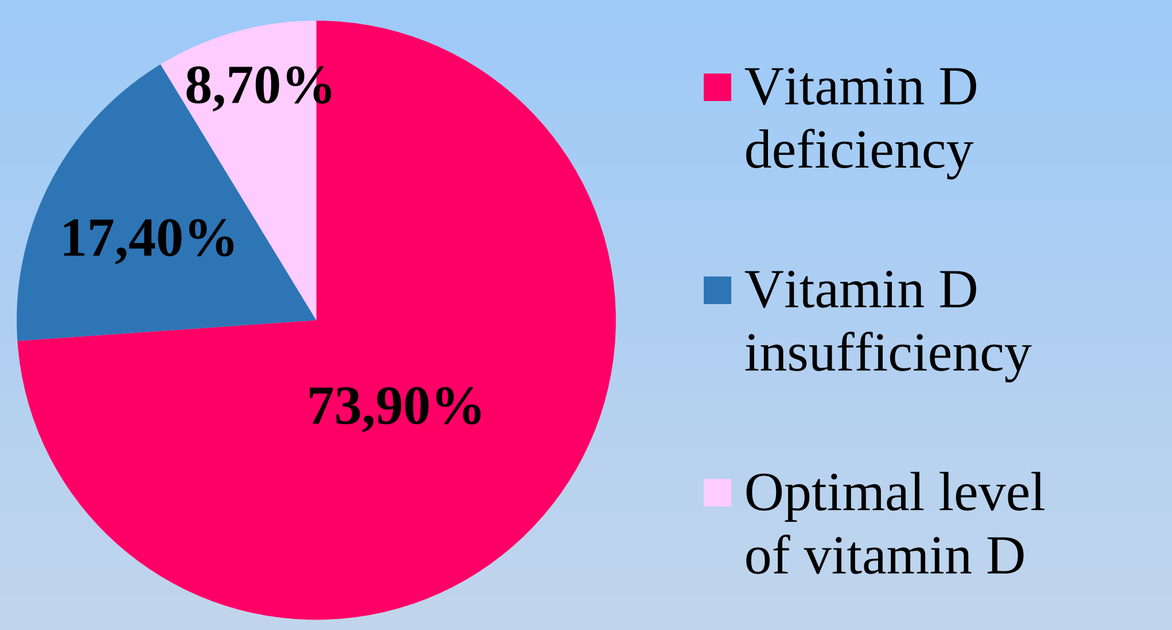


Figure. Vitamin D status in patients with Helicobacter pylori-positive chronic gastritis

Conclusion: In the study conducted in patients with Helicobacter pylori-positive chronic gastritis, the vitamin D status revealed a deficiency or insufficiency of blood plasma 25(OH)D levels in 91.3% of cases. Assessing vitamin D status in patients with H. pylori-positive gastritis is essential for understanding the mechanisms of bacterial persistence and for developing ways to improve treatment effectiveness.

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