Vitamin D and Diagnostic Colonoscopy for Colorectal Cancer in Indonesian Population

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Abstract

ABSTRACT Objective: Colorectal cancer (CRC) is the world's third most common type of cancer. Case studies have shown an inverse correlation between serum vitamin D levels and the incidence of human colorectal cancer. This study aims to assess vitamin D levels in patients who underwent colonoscopy for diagnostic colorectal cancer. Methods: This research is a cross-sectional study with subjects in this study were patients who came to the Digestive Surgery polyclinic and underwent a colonoscopy for diagnosis of colorectal cancer. Level of vitamin D was collected before the colonoscopy examination and categorized into three groups, vitamin D with a value of < 20 ng/mL indicate a deficiency, a level of 20 − 30 ng/mL as an insufficiency level, and a value > 30 ng/mL as a sufficient value. A colonoscopy examination was performed to obtain a diagnosis of colorectal cancer based on anatomical pathology examination. Result: Examination of vitamin D levels from 120 subjects showed the average vitamin level was 16.36 ng/mL, which indicates vitamin D deficiency levels. A total of 85 subjects (70.8%) showed vitamin D deficiency, as many as 24 (20%) showed vitamin D insufficiency levels, and only 11 study subjects (9.2%) showed sufficient vitamin D levels. The colonoscopy showed 60 subjects (50%) with colorectal cancer. The relationship between vitamin D levels and the diagnosis of CRC showed a value of p = 0.60 (p > 0.05). Conclusion: There is no significant difference between low levels of Vitamin D and the diagnosis of colorectal cancer patients.

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