

## Profil zinc darah dan analisa tinja pada kolitis di RSUPN dr. Cipto Mangunkusumo = Profile of blood zinc and fecal analysis in colitis patients at RSUPN dr. Cipto Mangunkusumo

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### Abstrak

Latar Belakang : Kolitis merupakan penyakit gastrointestinal yang banyak ditemukan dan menjadi masalah utama di negara berkembang termasuk Indonesia. Zinc, trace element penting dengan berbagai fungsi diantaranya antimikrobal mukosa intestinal, meningkatkan fungsi barrier gastrointestinal, dan fungsi imun. Kolitis menyebabkan perubahan anatomis saluran gastrointestinal, dianggap dapat menyebabkan defisiensi zinc akibat gangguan penyerapan dan peningkatan ekskresi. Penelitian ini bertujuan mengetahui profil zinc darah dan analisa tinja pada pasien kolitis di RSUPN dr. Cipto Mangunkusumo. Metode : Dilakukan penelitian potong lintang pada bulan Agustus 2019-November 2019. Subjek kolitis diperoleh secara konsekutif dari pasien yang kontrol di poliklinik gastroenterologi atau menjalani kolonoskopi di Pusat Endoskopi Saluran Cerna RSUPN. dr. Cipto Mangunkusumo. Pemeriksaan sampel zinc darah secara spektrofotometri dan analisa tinja subjek kolitis untuk menilai profil zinc darah dan analisa tinja. Kadar zinc darah subjek kolitis dibandingkan dengan kadar zinc darah subjek sehat. Hasil : Terdapat 40 subjek kolitis dan 16 subjek sehat yang disertakan untuk dianalisis pada penelitian ini. Diperoleh 45% pasien kolitis yang defisiensi zinc dengan rerata kadar zinc kelompok kolitis adalah  $10,9 \pm 1,9 \mu\text{mol/L}$  dan rerata kadar zinc subjek sehat  $12,3 \pm 1 \mu\text{mol/L}$ . Profil analisa tinja kelompok kolitis ditemukan konsistensi lembek 90%, BAB berlendir 17,5%, peningkatan jumlah eritrosit 60%, peningkatan jumlah leukosit 5%, positif amilum 20%, positif lemak 7,5%, pH asam 97,5%, positif darah samar tinja 37,5%, dan jamur di tinja 7,5%.

Simpulan : Kadar zinc pada kelompok kolitis lebih rendah bermakna dibanding kadar zinc pada kelompok sehat. Perlu dilakukan penelitian lebih lanjut untuk mempertimbangkan pemberian terapi zinc pada pasien kolitis dengan defisiensi zinc.

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Background: Colitis is a common gastrointestinal disease that is a major problem in developing countries including Indonesia. Zinc, an important trace element with various functions including antimicrobial intestinal mucosa, improves gastrointestinal barrier function, and immune function. Colitis causes anatomical changes in the gastrointestinal tract, considered to cause zinc deficiency due to impaired absorption and increased excretion. This study aims to determine the profile of blood zinc and fecal analysis in colitis patients at RSUPN Dr. Cipto Mangunkusumo. Methods: A cross-sectional study was conducted on 40 colitis and 16 healthy subjects in August 2019-November 2019. Colitis subjects were obtained consecutively from patients who were in the gastroenterology outpatient clinic or underwent colonoscopy at the Gastroenterological Endoscopy Center of RSUPN. dr. Cipto Mangunkusumo. Spectrophotometric examination of blood zinc samples and fecal analysis of colitis subjects to assess blood zinc profile and stool analysis. The level of colitis in the subjects' blood zinc was compared with the level of zinc in the healthy subject. Results: There were 40 colitis subjects and 16 healthy subjects included for analysis in this study. 45% of colitis patients who were deficient in zinc with a mean zinc level in the colitis group were  $10.9 \pm 1.9 \text{ mol / L}$  and the mean zinc level in healthy subjects was  $12.3 \pm 1 \text{ mol / L}$ . Fecal analysis profile of colitis

group found 90% soft stool consistency, 17.5% slimy stool, increase in erythrocyte count 60%, increase in leukocyte count 5%, positive starch 20%, positive fat 7.5%, acid pH 97.5%, positive Fecal blood feces 37.5%, and fungi in feces 7.5%.

Conclusion: Zinc levels in the colitis group were significantly lower than zinc levels in the healthy group. Further research needs to be done to consider giving zinc therapy to colitis patients with zinc deficiency.