

Perbedaan Kadar *Alpha 1 Antitrypsin* Feses Berdasarkan Tingkat Keparahan Diare Akut pada Anak

Fitriyana, Yusri Dianne Jurnal, Eti Yerizel*

Departemen Ilmu Kesehatan Anak, *Pasca sarjana Ilmu Biomedik Fakultas Kedokteran Universitas Andalas/ RSUP dr M Djamil, Padang

Latar belakang. Diare dapat menyebabkan kekurangan gizi, gangguan pertumbuhan dan gangguan kognitif. Gangguan gizi dapat terjadi karena asupan makanan yang kurang, atau kehilangan langsung karena kerusakan mukosa usus. Kehilangan protein melalui saluran cerna dapat dinilai dengan pemeriksaan kadar *alpha 1 antitrypsin* feses.

Tujuan. Menilai perbedaan kadar *alpha 1 antitrypsin* feses berdasarkan tingkat keparahan diare akut pada anak.

Metode. Penelitian *cross sectional* dari Januari-Juli 2017. Penelitian dilakukan di RSUP Dr M Djamil dan RS Yos Sudarso Padang. Tingkat keparahan diare dinilai menggunakan *Vesikari clinical severity scoring system*. Kadar *alpha 1 antitrypsin* feses diperiksa dengan cara ELISA. Analisis statistik menggunakan uji *Kruskal-Wallis*.

Hasil. Dari 60 subjek penelitian, rerata kadar *alpha 1 antitrypsin* adalah $202,32 \pm 131,96$ mg/dL. Kadar *alpha 1 antitrypsin* feses pada kelompok tingkat keparahan diare ringan didapatkan $123,6 (87-295,1)$ mg/dL. Pada kelompok tingkat keparahan diare sedang $166,4 (23,8-332,9)$ mg/dL dan kelompok tingkat keparahan diare berat $268,6 (25,5-511,9)$ mg/dL. Uji analisis statistik menunjukkan terdapat perbedaan kadar *alpha 1 antitrypsin* feses yang signifikan pada setiap tingkat keparahan diare dengan nilai $p=0,003$.

Kesimpulan. Terdapat peningkatan kadar *alpha 1 antitrypsin* feses yang bermakna sesuai dengan tingkat keparahan diare. **Sari Pediatri** 2018;19(5):267-72

Kata kunci: tingkat keparahan diare akut, kadar *alpha 1 antitrypsin* feses, anak

The Differences in Alpha Level 1 Antitrypsin Feses Based on Acute Severity Diarrhea in Children

Fitriyana, Yusri Dianne Jurnal, Eti Yerizel*

Background. Diarrhea may lead to malnourished, growth disorder, and cognitive impairment. Nutritional disorders in diarrhea sufferers may occur of poor food intake, malabsorption due to intestinal mucosal damage, catabolism caused by the infection process and direct loss due to intestinal mucosal damage. Loss of protein through the gastrointestinal tract can be assessed by examination of alpha 1 antitrypsin of stool.

Objective. To determine the association of alpha 1 antitrypsin of stool with the severity level of diarrhea in children.

Methods. This study was cross sectional study from January-July 2017 conducted in RSUP DR M Djamil hospital and Yos Sudarso Hospital in Padang. The severity level of diarrhea was obtained by Vesikari clinical severity scoring system. Fecal alpha 1 antitrypsin value conducted by ELISA. Statistical analysis was conducted by Kruskal Wallis test.

Result. From 60 subjects the mean age of alpha 1 antitrypsin was 202.32 mg/dL \pm 131.96 . Fecal alpha 1 antitrypsin value according to severity of the diarrhea was $123.6 (87-295.1)$ mg/dL, $166.4 (23.8-332.9)$ mg/dL, and $268.6 (25.5-511.9)$ mg/dL respectively for mild, moderate and severe diarrhea. Based on statistical analysis there are significant differences between fecal alpha 1 antitrypsin value in every severity of diarrhea ($p=0.003$).

Conclusions: There is association in between alpha 1 antitrypsin level of stool with severity level of diarrhea. **Sari Pediatri** 2018;19(5):267-72

Keyword: severity level of diarrhea, alpha 1 antitrypsin of stool, children