INTISARI

KADAR EOSINOFIL ABSOLUT DARAH DAN KEPADATAN EOSINOFIL DI MUKOSA KOLON BERDASARKAN KEPARAHAN *INFLAMMATORY BOWEL DISEASE*

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Latar Belakang: Proses inflamasi pada *Inflamatory Bowel Disease* (IBD) melibatkan berbagai jenis sel inflamasi, termasuk eosinofil. Eosinofil tidak hanya berhubungan dengan keparahan IBD tetapi juga berhubungan dengan perbaikan klinis. Sehingga peran eosinofil baik di darah ataupun di mukosa kolon pada penderita IBD belum sepenuhnya dipahami dan terkonfirmasi.
Tujuan Penelitian: Mengetahui adanya perbedaan kadar eosinofil absolut di darah berdasarkan keparahan Inflammatory Bowel Disease dan mengetahui adanya perbedaan kepadatan eosinofil di mukosa kolon berdasarkan keparahan Inflammatory Bowel Disease.
Metode Penelitian: Penelitian ini merupakan studi prospektif yang dilaksanakan menggunakan metode *cross sectional* dengan *consecutive sampling* dalam kurun waktu Agustus 2020 - Juli 2021. Subjek penelitian adalah penderita IBD yang menjalani rawat inap atau rawat jalan di RSUP Dr Sardjito yang memenuhi kriteria inklusi dan kriteria eksklusi. Peneliti melakukan penilaian data kadar eosinofil absolut di darah perifer dan kepadatan eosinofil pada mukosa kolon. Jumlah biopsi dan lokasi pengambilan biopsi ditentukan berdasarkan kolonoskopi yang dilakukan oleh Konsultan Gastroentero-Hepatologi. Perhitungan eosinofil dalam jaringan mukosa kolon dilakukan oleh Spesialis Patologi Anatomi. Penilaian keparahan penyakit IBD menggunakan skor *Truelove Witts* untuk pasien Kolitis Ulseratif (KU) dan *Crohn's Disese Activity Index* (CDAI) untuk pasien Penyakit Crohn (PC). Analisis menggunakan program komputer dengan nilai p <0,05 dianggap bermakna secara statistik.
Hasil Penelitian: Terdapat 50 subyek penelitian dengan median usia 55 tahun (24-77 tahun). Jumlah pasien laki-laki vs perempuan tidak jauh berbeda yakni 26 orang (52 %) vs 24 orang (48 %). Jumlah pasien KU dominan, yakni 48 orang (96 %). Keparahan IBD dibagi menjadi tiga kelompok dengan jumlah pasien IBD ringan 22 orang (44 %), \ sedang 11 orang (20 %), dan berat 18 orang (36 %). Jumlah pasien yang mengalami eosinofilia sebanyak 7 pasien (14 %) dan eosinofilia mukosa kolon sebanyak 5 pasien (10 %). Analisis menggunakan uji Kruskal Wallis didapatkan mean rank eosinofil absolut darah pada IBD ringan sebesar 21,45, pada IBD sedang sebesar 25,50, pada IBD berat sebesar 30,44 (p = 0,152). Mean rank eosinofil mukosa kolon pada IBD ringan sebesar 19,48, pada IBD sedang sebesar 27,00, pada IBD berat sebesar 32,03 (p = 0,023). Terdapat korelasi sedang/moderat yang bermakna secara statistik (r = 0,392; p = 0,005).
Kesimpulan: Tidak terdapat perbedaan bermakna kadar eosinofil absolut di darah berdasarkan keparahan Inflammatory Bowel Disease dan terdapat perbedaan bermakna kepadatan eosinofil di mukosa kolon berdasarkan keparahan Inflammatory Bowel Disease.

Kata kunci: *Inflammatory Bowel Disease (IBD), eosinofil absolut darah, eosinofil mukosa kolon*

ABSTRACT

ABSOLUTE EOSINOPHIL COUNTS AND COLONIC MUCOSAL EOSINOPHILS BASED ON INFLAMMATORY BOWEL DISEASE SEVERITY

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Background: The inflammatory process in Inflammatory Bowel Disease (IBD) involves various types of inflammatory cells, including eosinophils. Eosinophils are not only associated with the severity of IBD but are also associated with clinical improvement. So that the role of eosinophils either in the blood or in the colonic mucosa of IBD patients have not been fully understood and confirmed.
Objectives: To determine the difference in absolute eosinophil counts in the blood based on the severity of IBD and to determine the differences in the density of colonic mucosal eosinophil based on the severity of IBD
Methods: This is a prospective, cross sectional study with consecutive sampling in the period August 2020 - July 2021. The research subjects were IBD inpatient or outpatient at Dr Sardjito Hospital who met the inclusion criteria and exclusion criteria. Researchers assessed data on absolute eosinophil counts in peripheral blood and eosinophil density in the colonic mucosa. The number of biopsies and the location of the biopsy were determined based on a colonoscopy performed by a Gastroentero-Hepatology Consultant. The calculation of eosinophils in the colonic mucosal tissue was carried out by an Anatomical Pathologist Specialist. IBD severity was assessed using the Truelove Witts score for Ulcerative Colitis (UK) and Crohn's Disease Activity Index (CDAI) for Crohn's Disease (CD) patients. Analysis using a computer program with a p value <0.05 was considered statistically significant.
Result: There were 50 research subjects with a median age of 55 years (24-77 years). The number of male vs female patients were not much different, namely 26 people (52%) vs 24 people (48%). The number of UK patients were dominant, namely 48 people (96%). The severity of IBD were divided into three groups with the number of patients with mild IBD 22 (44%), moderate 11 people (20%), and severe IBD 18 people (36%). The number of patients with eosinophilia were 7 patients (14%) and colonic mucosal eosinophilia were 5 patients (10%). Kruskal Wallis test found that the mean absolute eosinophil blood rank in mild IBD was 21.45, moderate IBD was 25.50, and severe IBD was 30.44 ($p = 0.152$). The mean rank of colonic mucosal eosinophils in mild IBD was 19.48, in moderate IBD was 27.00, in severe IBD was 32.03 ($p = 0.023$) and there was a statistically significant moderate correlation ($r = 0.392$; $p = 0.005$).
Conclusion: There is no significant difference in absolute eosinophil counts in the blood based on the severity of IBD and there is a significant difference in the density of colonic mucosal eosinophil based on the severity of IBD.

Keywords: *Inflammatory Bowel Disease (IBD), absolute eosinophil counts, colonic mucosal eosinophils*