ABSTRAK

DAMPAK PUASA RAMADAN TERHADAP KADAR *MARKER* INFLAMASI *INTERLEUKIN-6* (IL-6) DAN *HIGH SENSITIVITY C-REACTIVE PROTEIN* (HS-CRP) PADA PASIEN KANKER PAYUDARA *LUMINAL* YANG SEDANG MENJALANI TERAPI HORMON DI RSUP DR. SARDJITO YOGYAKARTA

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Pendahuluan: Puasa Ramadan merupakan bentuk pembatasan asupan yang dapat memengaruhi respons metabolik dan inflamasi tubuh. Pada pasien kanker payudara luminal yang menjalani terapi hormonal, perubahan marker inflamasi, Interleukin-6 (IL-6) dan high sensitivity C-reactive protein (hs-CRP) selama puasa masih belum banyak diteliti.

Tujuan: Mengetahui dampak puasa Ramadan terhadap kadar marker inflamasi IL-6 dan hs-CRP pada pasien kanker payudara luminal yang sedang menjalani terapi hormon di RSUP Dr. Sardjito Yogyakarta.

Metode Penelitian: Penelitian ini merupakan quasi experimental dengan rancangan pre-post pada pasien kanker payudara subtipe luminal yang menjalani terapi hormonal. Rekrutmen dilakukan satu minggu sebelum Ramadan 2025. Sampel darah diambil dua kali, yaitu sebelum puasa Ramadan (17–28 Februari 2025) dan pada minggu keempat Ramadan. Dari 70 pasien yang direkrut, sebanyak 61 pasien menyelesaikan penelitian sesuai protokol. Karakteristik subjek meliputi usia, indeks massa tubuh (IMT), tekanan darah sistolik (TDS), status HER2, dan durasi terapi hormonal. Analisis dilakukan untuk menilai perbedaan kadar IL-6 dan hs-CRP sebelum dan sesudah puasa serta analisis subkelompok berdasarkan faktor klinis dasar.

Hasil: Sebanyak 61 pasien dianalisis dengan median usia 55 tahun (50–60) dan median IMT 23,1 kg/m² (21,5–27,2). Kadar IL-6 meningkat bermakna setelah puasa Ramadan, dari rerata 4,28 ± 1,42 pg/mL menjadi 5,80 ± 4,87 pg/mL (p=0,021). Median IL-6 juga meningkat dari 3,95 (3,29–5,18) pg/mL menjadi 4,09 (3,44–5,79) pg/mL. Kadar hs-CRP meningkat sangat bermakna dari rerata 1,91 ± 2,46 mg/L menjadi 12,29 ± 21,93 mg/L (p<0,001), dengan median meningkat dari 0,75 (0,10–3,21) mg/L menjadi 3,86 (0,75–11,23) mg/L. Pada analisis subkelompok, peningkatan IL-6 bermakna pada pasien usia ≥55 tahun (p=0,042), IMT <25 kg/m² (p=0,044), TDS ≥130 mmHg (p=0,029), dan durasi terapi hormonal ≥5 tahun (p=0,017).

Kesimpulan: Puasa Ramadan pada pasien kanker payudara luminal yang menjalani terapi hormonal berhubungan dengan peningkatan kadar IL-6 dan hs-CRP. Temuan ini menunjukkan bahwa puasa Ramadan dapat memengaruhi respons inflamasi sistemik pada populasi ini.

Kata kunci: puasa Ramadan, kanker payudara luminal, terapi hormonal, IL-6, hs-CRP, inflamasi.

ABSTRACT

THE IMPACT OF RAMADAN FASTING ON INFLAMMATORY MARKERS INTERLEUKIN-6 (IL-6) AND HIGH SENSITIVITY C-REACTIVE PROTEIN (HS-CRP) IN LUMINAL BREAST CANCER PATIENTS RECEIVING HORMONAL THERAPY AT DR. SARDJITO GENERAL HOSPITAL YOGYAKARTA

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Background: Ramadan fasting represents a form of dietary restriction that may influence metabolic and inflammatory responses. In patients with luminal breast cancer receiving hormonal therapy, changes in inflammatory markers such as Interleukin-6 (IL-6) and high-sensitivity C-reactive protein (hs-CRP) during fasting have not been extensively studied.
Objective: To evaluate the impact of Ramadan fasting on inflammatory markers IL-6 and hs-CRP in patients with luminal breast cancer undergoing hormonal therapy at Dr. Sardjito General Hospital Yogyakarta.
Methods: This study employed a quasi-experimental pre–post design involving luminal subtype breast cancer patients receiving hormonal therapy. Recruitment was conducted one week prior to Ramadan 2025. Blood samples were obtained twice: before Ramadan fasting (February 17–28, 2025) and during the fourth week of Ramadan. Of the 70 patients recruited, 61 completed the study according to protocol. Baseline characteristics included age, body mass index (BMI), systolic blood pressure, HER2 status, and duration of hormonal therapy. Analyses were performed to evaluate differences in IL-6 and hs-CRP levels before and after Ramadan fasting, as well as subgroup analyses based on clinical characteristics.
Results: A total of 61 patients were analyzed with a median age of 55 years (50–60) and median BMI of 23.1 kg/m² (21.5–27.2). IL-6 levels increased significantly after Ramadan fasting, from a mean of 4.28 ± 1.42 pg/mL to 5.80 ± 4.87 pg/mL ($p=0.021$). Median IL-6 also increased from 3.95 (3.29–5.18) pg/mL to 4.09 (3.44–5.79) pg/mL. hs-CRP levels increased markedly from a mean of 1.91 ± 2.46 mg/L to 12.29 ± 21.93 mg/L ($p<0.001$), with median values rising from 0.75 (0.10–3.21) mg/L to 3.86 (0.75–11.23) mg/L. Subgroup analysis showed significant increases in IL-6 among patients aged ≥55 years ($p=0.042$), BMI <25 kg/m² ($p=0.044$), systolic blood pressure ≥130 mmHg ($p=0.029$), and hormonal therapy duration ≥5 years ($p=0.017$).
Conclusion: Ramadan fasting in luminal breast cancer patients receiving hormonal therapy was associated with increased IL-6 and hs-CRP levels. These findings suggest that Ramadan fasting may influence systemic inflammatory responses in this patient population.
Keywords: Ramadan fasting, luminal breast cancer, hormonal therapy, IL-6, hs-CRP, inflammation