ABSTRAK

KORELASI ANTARA NILAI RASIO PLATELET LIMFOSIT (RPL) DAN NILAI RASIO NEUTROFIL LIMFOSIT (RNL) DENGAN NILAI CA-125 PADA PASIEN KANKER OVARIUM EPITELIAL REKUREN DI RSUP DR. SARDJITO

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Latar Belakang: Kanker ovarium menjadi penyebab tertinggi mortalitas wanita akibat kanker ginekologi dengan angka rekurensi tinggi sehingga menyebabkan banyak kegagalan terapi. Keterlambatan deteksi rekurensi masih sering ditemukan. CA-125 umumnya digunakan untuk monitoring rekurensi. Di sisi lain, marker inflamasi dinilai berperan signifikan dalam berbagai kanker. Penggunaan rasio platelet limfosit (RPL) dan rasio neutrofil limfosit (RNL) berpotensi dapat digunakan sebagai prediktor rekurensi kanker ovarium.

Tujuan: Mengetahui korelasi nilai RPL dan RNL terhadap nilai CA-125 pada rekurensi kanker ovarium epitelial.

Metode: Studi *cohort retrospective* dengan *consecutive sampling* pada data rekam medis pasien kanker ovarium epitelial rekuren di RSUP Dr. Sardjito Yogyakarta dalam kurun waktu 1 Januari 2018 hingga 31 Desember 2022.

Hasil: Terdapat korelasi positif antara nilai RPL dan CA-125 saat sebelum kemoterapi (p =0,007, r =0,256), pasca 6 siklus kemoterapi (p =0,002, r =0,286), dan rekurensi (p =0,002, r =0,286). Terdapat korelasi positif antara nilai RNL dan CA-125 saat sebelum kemoterapi (p =0,011, r =0,242), pasca 3 siklus kemoterapi (p =0,011, r =0,242), dan rekurensi (p =0,001, r =0,320). Nilai CA-125 saat rekurensi pada pasien dengan kanker ovarium epitelial tipe 2 signifikan lebih tinggi dibandingkan pasien dengan kanker ovarium epitelial tipe 1 (p =0,047, *effect size* =0,18). Secara multivariat, nilai CA-125 pasca 6 siklus kemoterapi (p =0,001), nilai RPL sebelum kemoterapi (p =0,001), dan kanker ovarium epitelial tipe 2 (p =0,002) merupakan prediktor signifikan terhadap nilai CA-125 saat rekurensi.

Kesimpulan: Tingginya nilai RPL dan RNL secara signifikan berkorelasi dengan CA-125 baik sebelum kemoterapi, pasca 3 dan 6 siklus kemoterapi, serta saat rekurensi. Secara simultan, nilai CA-125 pasca 6 siklus kemoterapi, nilai RPL sebelum kemoterapi, dan kanker ovarium epitelial tipe 2 merupakan faktor prediktor terhadap tingginya nilai CA-125 saat rekurensi kanker ovarium epitelial.

Kata Kunci: RPL, RNL, CA-125, kanker ovarium epitelial rekuren

ABSTRACT

CORRELATION BETWEEN PLATELET LYMPHOCYTE RATIO (PRL) AND NEUTROPHIL LYMPHOCYTES RATIO (NLR) TO CA-125 IN RECURRENT EPITHELIAL OVARIAN CANCER PATIENTS AT DR. SARDJITO HOSPITAL

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Background: Ovarian cancer is the highest cause of female mortality due to gynecological cancer with high rate of recurrence that cause much failure of therapies. Delays in detection of recurrences are still often found. CA-125 is commonly used for recurrence monitoring. Inflammatory markers are considered to play a significant role in various cancers. The use of platelet lymphocyte ratio (PLR) and neutrophil lymphocyte ratio (NLR) can potentially be used as predictors of epithelial ovarian cancer (EOC) recurrence.

Objective: To determine the correlation between PLR and NLR values to CA-125 value on EOC recurrence.

Methods: Retrospective cohort study with consecutive sampling on medical record data of EOC recurrence patients at Dr. Sardjito Hospital Yogyakarta from January 1st, 2018 to December 31st, 2022.

Results: There is positive correlation between PLR and CA-125 values before chemotherapy ($p =0.007$, $r =0.256$), after 6 cycles of chemotherapy ($p =0.002$, $r =0.286$), and also at recurrence ($p =0.002$, $r =0.286$). There is positive correlation between NLR and CA-125 values before chemotherapy ($p =0.011$, $r =0.242$), after 3 cycles of chemotherapy ($p =0.011$, $r =0.242$), and also at recurrence ($p =0.001$, $r =0.320$). The value of CA-125 at recurrence in patients with type 2 EOC is significantly higher than patients with type 1 EOC ($p =0.047$, effect size $=0.18$). Multivariately, CA-125 value after 6 cycles of chemotherapy ($p =0.001$), PLR value before chemotherapy ($p =0.001$), and type 2 EOC ($p =0.002$), are significant predictors of CA-125 value at recurrence.

Conclusion: High level of PLR and NLR values are significantly correlated with CA-125 both before chemotherapy, after 3 and 6 cycles of chemotherapy, and also at recurrence. Simultaneously, CA-125 value after 6 cycles of chemotherapy, PLR value before chemotherapy, and type 2 EOC are predictors for high level of CA-125 value during EOC recurrence.

Keywords: PLR, NLR, CA-125, epithelial ovarian cancer recurrence