

ABSTRAK

Latar Belakang : *Percutaneous Nephrolithotomy* (PCNL) adalah prosedur terapi pilihan untuk batu ginjal. Sekresi IL-6 distimulasi selama respon inflamasi sekunder akibat cedera jaringan atau infeksi. Pemberian analgetik yang tepat dapat menurunkan angka morbiditas, menurunkan hari perawatan dan menurunkan pembiayaan. **Tujuan** Mengetahui perbandingan kadar serum IL-6 terhadap ibuprofen paracetamol dexametason pada pasien PCNL. **Metode :** Penelitian observasional analitik dengan desain cross sectional di RSUD Prof. Dr. Margono Soekarjo pada periode Desember 2024 hingga Januari 2025 pada pasien yang menjalani prosedur PCNL dan mendapat terapi ibuprofen, paracetamol dan dexametason, yang memenuhi kriteria inklusi dan eksklusi. Kelompok observasional (masing-masing 15 pasien) adalah: Kelompok A 1000 mg parasetamol dan 400 mg ibuprofen dan 5 mg deksametason; Kelompok B 1000 mg parasetamol dan 400 mg ibuprofen. Kadar IL6 diukur sebelum dan 2 jam setelah prosedur PCNL. Kadar IL6 diukur dengan ELISA (*Enzyme-linked immunosorbent assay*). Analisis perbandingan kadar IL-6 pre ataupun post PCNL menurut jenis analgesik menggunakan uji t tidak berpasangan, sedangkan perbandingan perubahan kadar IL-6 dianalisis dengan uji *Mann Whitney*. Analisis normalitas sebaran data dilakukan menggunakan uji *Shapiro Wilk*. Analisis menggunakan SPSS versi 25. **Hasil :** Perbandingan perubahan kadar IL-6 pre PCNL dan post PCNL antara kelompok A dan kelompok B tidak berbeda signifikan karena nilai p dari uji *Mann Whitney* yang didapat sebesar 0,787 ($>0,05$). Penggunaan kedua jenis analgesik (kombinasi parasetamol, ibuprofen dan dexametason serta paracetamol dan ibuprofen tidak memengaruhi perubahan kadar IL-6 pada pasien yang menjalani PCNL. **Kesimpulan :** Tidak ada perbedaan yang signifikan dalam kadar IL-6 pasca PCNL antara dua kelompok observasi.

Keywords: PCNL, IL6, paracetamol, ibuprofen, dexamethasone

ABSTRACT

Background: Percutaneous Nephrolithotomy (PCNL) is the therapeutic procedure of choice for kidney stones. IL-6 secretion is stimulated during a secondary inflammatory response due to tissue injury or infection. Proper administration of analgesics can reduce morbidity rates, reduce treatment days, and reduce financing. **Objective:** To determine the comparison of serum levels of IL-6 to the of ibuprofen, paracetamol, dexamethasone in PCNL patients. **Method:** An analytical observational study with a cross-sectional design at Prof. Dr. Margono Soekarjo Hospital in the period from December 2024 to January 2025 in patients undergoing PCNL procedures and receiving ibuprofen, paracetamol, and dexamethasone therapy, which met the inclusion and exclusion criteria. The observational group (15 patients each) was: Group A 1000 mg paracetamol and 400 mg ibuprofen and 5 mg dexamethasone; Group B 1000 mg paracetamol and 400 mg ibuprofen. IL-6 levels were measured before and 2 hours after the PCNL procedure. IL-6 levels were measured by ELISA (enzyme-linked immunosorbent assay). Comparative analysis of pre- or post-PCNL IL-6 levels by type of analgesic using unpaired t-test, while the comparison of changes in IL-6 levels was analyzed with the Mann-Whitney test. To determine whether the data distribution was normal, we used the Shapiro-Wilk test. The analysis used SPSS version 25. **Results:** The comparison of changes in pre-PCNL and post-PCNL IL-6 levels between group A and group B was not significantly different because the p-value of the Mann-Whitney test obtained was 0.787 (>0.05). The use of both types of analgesics (the combination of paracetamol, ibuprofen and dexamethasone as well as paracetamol and ibuprofen) did not affect changes in IL-6 levels in patients undergoing PCNL. **Conclusions:** There was no significant difference in IL-6 levels post-PCNL between the two observation groups.

Keywords: PCNL, IL6, paracetamol, ibuprofen, dexamethasone