

**PERBEDAAN KADAR INTERLEUKIN-6 PADA PASIEN ENDOMETRIOSIS
DAN NON-ENDOMETRIOSIS YANG MENJALANI BEDAH LAPAROSKOPI
GINEKOLOGI**

ABSTRAK

Pendahuluan: Endometriosis merupakan gangguan ginekologis dengan inflamasi kronis yang berperan pada nyeri dan infertilitas. IL-6 diduga berperan dalam patogenesis serta berpotensi sebagai biomarker diagnosis.

Tujuan: Mengetahui perbedaan kadar Interleukin-6 pada pasien endometriosis dan non-endometriosis yang menjalani bedah laparoskopi ginekologi.

Metode: Penelitian studi observasional analitik dengan desain cross sectional yang dilakukan di instalasi bedah sentral RSUP dr. Kariadi Semarang selama Juni-Desember 2025. Subjek penelitian adalah pasien suspek endometriosis usia 18-49 tahun yang menjalani laparoskopi, dipilih dengan metode *consecutive* sampling sesuai kriteria inklusi dan eksklusi. Data primer berupa kadar IL-6 cairan peritoneum diperoleh saat tindakan laparoskopi dan diperiksa menggunakan metode ELISA. Analisis data meliputi uji univariat dan bivariat, dengan uji Independent T-Test untuk data berdistribusi normal atau Mann Whitney U untuk data tidak berdistribusi normal guna menilai perbedaan kadar IL-6 antara kelompok endometriosis dan non-endometriosis.

Hasil: Sebanyak 40 subjek dianalisis, terdiri dari 20 pasien endometriosis dan 20 non-endometriosis, dengan karakteristik dasar yang tidak berbeda bermakna pada seluruh variabel ($p > 0,05$). Kadar IL-6 cairan peritoneum pada kelompok endometriosis lebih tinggi secara signifikan dibandingkan non-endometriosis ($6,53 \pm 3,95$ vs $4,39 \pm 1,26$ pg/mL; $p = 0,006$). Analisis faktor perancu menunjukkan bahwa obesitas, hipertensi, diabetes mellitus, dan riwayat merokok tidak memiliki hubungan bermakna dengan kadar IL-6 (seluruh $p > 0,05$).

Simpulan: Kadar IL-6 cairan peritoneum lebih tinggi secara bermakna pada pasien endometriosis dibandingkan non-endometriosis dan tidak dipengaruhi oleh obesitas, hipertensi, diabetes mellitus, maupun riwayat merokok.

Kata kunci: Diabetes mellitus; Endometriosis; Hipertensi; Interleukin-6; Obesitas

**DIFFERENCES IN INTERLEUKIN-6 LEVELS IN ENDOMETRIOSIS AND NON-
ENDOMETRIOSIS PATIENTS UNDERGOING LAPAROSCOPIC
GYNECOLOGICAL SURGERY**

ABSTRACT

Introduction: Endometriosis is a gynecological disorder with chronic inflammation that contributes to pain and infertility. IL-6 is suspected to play a role in its pathogenesis and has potential as a diagnostic biomarker.

Objective: To determine the differences in Interleukin-6 levels in endometriosis and non-endometriosis patients undergoing gynecological laparoscopic surgery.

Methods: This was an observational analytical study with a cross-sectional design conducted at the central surgical installation of Dr. Kariadi General Hospital, Semarang, from June to December 2025. Subjects were patients with suspected endometriosis aged 18-49 years undergoing laparoscopy, selected using consecutive sampling according to inclusion and exclusion criteria. Primary data, including peritoneal fluid IL-6 levels, were obtained during laparoscopy and examined using the ELISA method. Data analysis included univariate and bivariate tests, using the Independent T-Test for normally distributed data or the Mann-Whitney U test for non-normally distributed data to assess differences in IL-6 levels between the endometriosis and non-endometriosis groups.

Results: A total of 40 subjects were analyzed, consisting of 20 endometriosis patients and 20 non-endometriosis patients, with baseline characteristics that did not differ significantly across all variables ($p > 0.05$). Peritoneal fluid IL-6 levels in the endometriosis group were significantly higher than those in the non-endometriosis group (6.53 ± 3.95 vs. 4.39 ± 1.26 pg/mL; $p = 0.006$). Confounding factor analysis showed that obesity, hypertension, diabetes mellitus, and smoking history were not significantly associated with IL-6 levels (all $p > 0.05$).

Conclusion: Peritoneal fluid IL-6 levels were significantly higher in patients with endometriosis compared to those without endometriosis and were not affected by obesity, hypertension, diabetes mellitus, or smoking history.

Keywords: Diabetes mellitus; Endometriosis; Hypertension; Interleukin-6; Obesity

