

## Analisis aktivitas superoxide dismutase dan malindaldehide pada penderita keganasan ovarium dan tumor jinak ovarium = Analysis of activity of superoxide dismutase and malondialdehyde in patients with ovarian malignancy and ovarian benign tumors

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### Abstrak

Kanker ovarium masih menempati urutan kedua terbanyak dalam keganasan ginekologi dan merupakan penyebab utama kematian akibat kanker pada perempuan. Banyak bukti menunjukkan bahwa kanker ovarium umumnya dalam pengaruh stress oksidatif. Dalam penelitian ini bertujuan untuk mengetahui aktivitas stress oksidatif melalui pengukuran enzim Superoxide Dismutase (SOD) dan kadar Malondialdehyde (MDA) pada penderita keganasan ovarium dibandingkan dengan penderita tumor jinak ovarium. Penelitian dilakukan dengan uji potong-lintang yang dilaksanakan di Ruang Rawat Kebidanan Ginekologi RSCM Jakarta, RS Persahabatan Jakarta dan RS Fatmawati Jakarta pada Juli hingga Desember 2018. Seluruh penderita keganasan ovarium dan penderita tumor jinak ovarium yang memenuhi kriteria diikutsertakan dalam penelitian ini. Darah penderita tumor ovarium diambil sebelum dilakukan operasi, lalu sampel dilakukan pengukuran kadar SOD dan MDA. Terdapat 35 penderita keganasan ovarium dan 43 penderita tumor jinak ovarium yang diikutsertakan dalam penelitian ini. Rerata atau median kadar SOD dan MDA pada penderita keganasan ovarium adalah 1,23 (0,24-5,709) dan  $0,803 \pm 0,316$ , sementara rerata atau median kadar SOD dan MDA pada penderita tumor jinak ovarium adalah 0,488 (0,101-1,86) dan  $0,634 \pm 0,266$ . Terdapat perbedaan kadar SOD dan MDA yang bermakna antara kedua kelompok. Terdapat perbedaan kadar SOD yang bermakna antara penderita keganasan ovarium stadium awal dengan penderita keganasan ovarium stadium lanjut. Sementara pada pemeriksaan MDA tidak terdapat perbedaan bermakna antara penderita stadium awal dengan stadium lanjut. Kesimpulan pada penelitian ini terdapat perbedaan kadar SOD dan MDA yang bermakna antara penderita keganasan ovarium dengan penderita tumor jinak ovarium.

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Ovarian cancer is the leading cause of death due to gynecological malignancies among women. A lot of evidence shows that ovarian cancer is generally influenced by oxidative stress. In this study aims to determine the activity of SOD enzymes and MDA levels in patients with ovarian malignancies and patients with benign ovarian tumors. The study was conducted by cross-sectional tests carried out in the RSCM Jakarta Gynecology Obstetric Room and Persahabatan Hospital Jakarta and Fatmawati Hospital Jakarta in July to December 2018. All patients with ovarian malignancies and patients with benign ovarian tumors who met the criteria were included in this study. Blood from ovarian tumor patients taken before surgery, then the samples were measured for SOD and MDA levels. There were 35 ovarian malignancies and 43 patients with benign ovarian tumors included in the study. The mean or median level of SOD and MDA in patients with ovarian malignancy is 1.23 (0.24 - 5.709) and  $0.803 \pm 0.316$ , while the mean or median level of SOD and MDA in patients with benign ovarian tumors is 0.488 (0.101-1.86) and  $0.634 \pm 0.266$ . There were significant differences in SOD and MDA levels between the two groups. There were significant differences in SOD levels between patients with early-stage ovarian malignancies and those with advanced ovarian

malignancies. While on MDA examination there were no significant differences between patients with early stages with advanced stages. Conclusion in this study were significant differences in SOD and MDA levels between ovarian malignancies and patients with benign ovarian tumors