

HUBUNGAN EKSPRESI MATRIKS METALLOPROTEINASE-7 (MMP-7) PADA KANKER EPITEL OVARIUM TIPE SEROSUM DAN MUSINOSUM DENGAN STADIUM KLINIS FIGO

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INTISARI

Latar Belakang: Kanker ovarium merupakan kanker dengan tingkat kematian kelima tertinggi pada wanita. Mortalitas kanker ovarium salah satunya ditentukan oleh kemampuan invasi dan metastasis sel kanker. Kemampuan tersebut dapat dinilai dengan stadium klinis FIGO. Salah satu enzim yang diduga berperan dalam proses invasi dan metastasis adalah matriks metalloproteinase-7 (MMP-7). Ekspresi MMP-7 yang tinggi diperkirakan berkorelasi dengan stadium lanjut dan prognosis buruk.

Tujuan: Penelitian ini bertujuan untuk mengkaji hubungan ekspresi mRNA MMP-7 dengan stadium klinis FIGO pada penderita karsinoma ovarium tipe serosum dan musinosum di RSUP Dr. Sardjito.

Metode: Penelitian ini menggunakan metode deskriptif analitik potong lintang (*cross-sectional*). Ekspresi mRNA MMP-7 pada sampel dan kontrol diukur dengan RT-qPCR. Korelasi stadium klinis FIGO dengan ekspresi mRNA MMP-7 dianalisis secara statistik menggunakan uji *Wilcoxon-Mann-Whitney*. Nilai $p < 0,05$ dianggap bermakna secara statistik.

Hasil: Ekspresi mRNA MMP-7 lebih tinggi pada subyek berusia ≥ 40 tahun ($p = 0,424$); belum pernah melahirkan anak ($p = 0,660$); memiliki IMT tinggi ($p = 0,838$); kanker tipe serosum dibanding musinosum ($p = 0,347$); derajat diferensiasi buruk dibanding baik ($p = 0,216$); dan stadium lanjut dibanding stadium awal ($p = 0,374$) namun perbedaan tersebut tidak bermakna secara statistik.

Kesimpulan: Tidak ada hubungan yang bermakna antara kadar mRNA MMP-7 dengan stadium klinis FIGO.

Kata Kunci: Kanker Epitel Ovarium, MMP-7, FIGO, Yogyakarta

**ASSOCIATION BETWEEN MATRIX METALLOPROTEINASE (MMP-7)
EXPRESSION IN SEROUS AND MUCINOUS OVARIAN CARCINOMA
WITH FIGO CLINICAL STAGE**

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ABSTRACT

Background: Ovarian cancer is the fifth leading cause of death among women. One of the factors contributing to mortality of ovarian cancer is its ability to invade and metastasize. FIGO clinical staging is the current parameter to measure such capacity. Enzyme matrix metalloproteinase-7 (MMP-7) is one of the suspected culprits, since it facilitates invasion and metastases process. High expression of MMP-7 may be correlated with advance stage and poor prognosis

Purpose: This study aimed to identify the correlation between the expression of mRNA MMP-7 and FIGO clinical staging of ovarian cancer cases in Central General Hospital Dr. Sardjito, Yogyakarta, Indonesia.

Method: This was a comparative analytical study with cross-sectional design. Expression of mRNA MMP-7 from sample and control were determined using RT-qPCR. Data then were analyzed using descriptive statistics and Wilcoxon-Mann-Whitney Test. A p-value less than 0.05 is applied to each statistical test as significant.

Result: The mean plasma serum of mRNA MMP-7 was higher among subjects aged ≥ 40 years old ($p = 0,424$); nulliparous ($p = 0,660$); had high BMI ($p = 0,838$); serous type of cancer rather than mucinous ($p = 0,347$); high grade than low grade ($p = 0,216$); and advance stage than early stage ($p = 0,374$). The differences were not statistically significant.

Conclusion: There was no significant correlation between plasma level of mRNA MMP-7 and FIGO clinical staging.

Keywords: Epithelial Ovarian Cancer, MMP-7, FIGO, Yogyakarta