PERSENTASE MYOFIBROBLAST-LIKE CELL PADA PROSES INVASI ENDOMETRIOMA DAN PERITONEAL ENDOMETRIOSIS DI MODEL CHORIOALLANTOIC MEMBRANE (CAM)

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ABSTRAK

Latar Belakang: Endometriosis didefinisikan sebagai pertumbuhan, adhesi, dan progresi dari kelenjar dan stroma endometrium di luar kavum uteri. Studi sebelumnyamengungkapkan bahwa wanita dengan endometriosis memiliki peningkatan risiko tumbuhnya *epithelial ovarian cancer*(EOC). *Myofibroblast* adalah sebuah sel yang dikenal sering ditemukan pada jaringan tumor dan dilaporkan pernah ditemukan pada lesi endometriosis. Studi lain mengungkapkan bahwa keberadaan *myofibroblast* dapat dijadikan sebagai salah satu penanda metaplasia.Hal tersebut dapat dimanfaatkan untuk mengetahui potensi berkembangnya lesi endometriosis menjadi lesi yang ganas, yang selama ini hanya dapat dilihat melalui data riwayat pasien. Untuk itu, perlu dilakukannya penelitian mengenai keberadaan *myofibroblast* pada dua jenis endometriosis yang paling sering terjadi, yaitu endometrioma dan peritoneal endometriosis.
Tujuan: Mengetahui ada tidaknya perbedaan rata-rata persentase *myofibroblast-like cell* pada jaringan Endometrioma dan Peritoneal Endometriosis serta hubungannya dengan berbagai tingkat invasi.
Metode: Penelitian ini merupakan penelitian *cross-sectional*. Potongan jaringan endometrioma dan peritoneal endometriosis yang diambil dari pasien RSUP Dr. Sardjito Yogyakarta melalui prosedur laparoskopi, ditanam pada CAM telur ayamyang telah dibuat lubang sirkuler berdiameter 1 cm di bagian ujung cangkang. Kemudian, telur diinkubasi selama 5 hari pada suhu 37^{o}C. Selanjutnya, jaringan dipanen, disimpan dalam PFA 4%, lalu dijadikan blok paraffin dan dipotong sebagai sediaan mikroskopis. Setelah itu, preparat yang telah diwarnai dengan hematoksilin eosin diamati dengan mikroskop cahaya untuk dilakukan penghitungan persentase *myofibroblast-like cell* pada 12 lapang pandang di masing-masing sampel.
Hasil: Didapatkan 16 sampel dari masing-masing jaringan. Rata-rata persentase *myofibroblast-like cell* pada jaringan endometrioma adalah 7,68% dan pada jaringan peritoneal endometriosis adalah 4,13%. Dari analisisperbedaan rata-rata persentase di kedua jaringan menggunakan uji-t independen, didapatkan *p value* sebesar 0,001. Sedangkan analisis hubungan antara persentase *myofibroblast-like cell* dengan tingkat invasi menggunakan uji korelasi *Spearman* menunjukkan masing-masing $r_s(14)=0{,}330$, $p=0{,}211$ pada jaringan endometrioma dan $r_s(14)=0{,}254$, $p=0{,}403$ pada jaringan peritoneal endometriosis.
Kesimpulan: Terdapat perbedaan yang bermakna antara persentase *myofibroblast-like cell* pada jaringan endometrioma dan peritoneal endometriosis. Terdapat hubungan positif yang yang lemah antara persentase *myofibroblast-like cell* dengan tingkat invasi masing-masing jaringan.

Kata Kunci:*Myofibroblast-like cell*, Endometrioma, Peritoneal Endometriosis

THE PERCENTAGE OF MYOFIBROBLAST-LIKE-CELL IN THE INVASION PROCESS OF ENDOMETRIOMA AND PERITONEAL ENDOMETRIOSIS IN CHORIOALLANTOIC MEMBRANE (CAM)

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ABSTRACT

Background: Endometriosis is defined as a growth, adhesion, and progression of endometrial glands and stroma outside the uterine cavity. Several previous studies have proven that women with endometriosis have higher risks for developing epithelial ovarian cancer (EOC). In addition, myofibroblast is a cell that is usually found in tumor stroma and it has been reported to be found in endometriotic lesion as well. Another study has proposed that the presence of myofibroblast can be regarded as a possible evidence of metaplasia. It can be used to find out endometriosis lesion's potention to develop into malignant tissues, which up to this point was done only with patient's medical records. Thus, a proper study need to be done in order to investigate the presence of myofibroblast in the two most common endometriosis lesion; endometrioma and peritoneal endometriosis.
Objectives: To find out whether there are differences in the percentage of myofibroblast-like cell in endometrioma and peritoneal endometriosis tissue, then to perceive its correlation with various invasion stage.
Methods: This is a cross-sectional study. The section of endometrioma and peritoneal endometriosis tissue from the patients in RSUP Dr. Sardjito Yogyakarta which were taken through laparoscopy procedure, were implanted to a chicken chorioallantoic membrane(CAM)which had been drilled to make a circular hole with the diameter of 1 cm in the edge of the eggshell. The eggs were incubated for 5 days at the temperature of 37^{o}C. Afterwards, the tissue were harvested, stored in PFA 4%, and then proceeded to become histological samples with hematoxylin-eosin staining. The samples were evaluated using a light microscope in 12 fields of views for each sample.
Result: 16 samples were obtained from each group of tissues. The mean percentage of myofibroblast-like cell in endometrioma was 7,68% while peritoneal endometriosis revealed percentage of 4,13%. Following that, an independent-t test were conducted, and the p value turned-out to be 0,001. In addition to this, the Spearman correlation test, which used to analyze the correlation between percentage of myofibroblast-like cell and invasion stages, showed the value of $r_s(14)=0{,}330$, $p=0{,}211$ for endometrioma and $r_s(14)=0{,}254$, $p=0{,}403$ for peritoneal endometriosis**.**
Conclusion: There was a significant difference in the mean percentage of myofibroblast-like cell between endometrioma and peritoneal endometriosis. There wasa weak positive correlation betweenthe percentage of myofibroblast-like cell and the invasion stage of those tissues.

Keywords: Myofibroblast-like cell, Endometrioma, Peritoneal Endometriosis