

## Penurunan ekspresi ARID1A pada kista endometriosis non atipik atipik dan clear cell carcinoma ovarii = The decrease of the arid1a expressions in non atypical atypical endometriosis cyst and ovarian clear cell carcinoma / Retno Widyawati

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### Abstrak

#### <b>ABSTRAK</b>

Latar belakang: Endometriosis merupakan kelainan ginekologik yang paling sering ditemukan. Seperti halnya endometrium di uterus juga dapat terjadi berbagai perubahan pada epitel yang melapisi kista endometriosis di ovarium, antara lain metaplasia, hiperplasia, atipia bahkan perubahan ke arah keganasan. Saat ini banyak penelitian yang menghubungkan antara endometriosis dan kanker ovarium terutama jenis clear cell dan dikenal dengan istilah endometriosis-associated ovarian carcinoma (EAOC) dan dilaporkan adanya mutasi yang menginaktifkan gen supresor tumor (ARID1A), sehingga protein BAF250a tidak diekspresikan pada Clear cell carcinoma (CCC) ovarii.

Bahan dan cara: Dilakukan pulasan imunohistokimia ARID1A pada sampel 20 kasus endometriosis non atipik, 20 kasus atipik dan 20 kasus CCC ovarii tahun 2012 hingga Maret 2015. Dari kelompok kasus CCC didapatkan 9 kasus EAOC. Selanjutnya dilihat adakah perbedaan persentase ekspresi ARID1A pada endometriosis non atipik, atipik, CCC ovarii serta endometriosis disertai CCC (EAOC).

Hasil: Pada kelompok kasus endometriosis non atipik, atipik dan CCC ada perbedaan bermakna persentase ekspresi ARID1A (uji Kruskal-Wallis  $p=0,0035$ ). Selanjutnya dilakukan analisis Post Hoc uji Mann-Whitney dan didapatkan perbedaan bermakna persentase ekspresi ARID1A antara endometriosis non atipik dan atipik dengan CCC ovarii ( $p=0,001$  dan  $p=0,0015$ ). Pada kelompok kasus endometriosis non atipik, atipik dan endometriosis pada EAOC, didapatkan ada perbedaan bermakna persentase ekspresi ARID1A (Uji Kruskal-Walis  $p=0,011$ ). Selanjutnya dilakukan analisis Post Hoc uji Mann-Whitney dan ada perbedaan bermakna persentase ekspresi ARID1A antara endometriosis non atipik dan atipik dengan EAOC ( $p=0,005$  dan  $p=0,008$ ).

Kesimpulan: Ekspresi ARID1A pada endometriosis non atipik dan atipik lebih tinggi bermakna dibanding CCC ovarii dan EAOC. Sehingga ekspresi ARID1A kemungkinan dapat digunakan sebagai petanda adanya transformasi ganas pada endometriosis.

#### <hr><i><b>ABSTRACT</b></i>

Background: Endometriosis is one of the most common gynecological abnormalities found. Endometriosis cyst in the ovary also exhibited changes in epithelial cyst just like endometrium in the uterus. Changes in the epithelial cells also include metaplasia, hyperplasia, atyphia even changes toward malignan characteristics. Nowadays, there are some research that linked endometriosis and clear cell ovarian cancer which is known with endometriosis-associated ovarian carcinoma (EAOC) it is reported that there?s a mutation that activated tumor suppressor gene (ARID1A), so protein BAF250a is not expressed in Clear Cell Carcinoma

(CCC) in the ovary.

**Materials and Methods:** Immunohistochemistry staining of ARID1A were done in 20 samples of non-atypical endometriosis, 20 samples of atypical endometriosis, 20 samples of CCC in the ovary from the year 2012 until march 2015. From the group that experienced CCC we get 9 cases of EAO. After that, we see if there's any difference in the percentage of ARID1A expression in non-atypical endometriosis, atypical endometriosis, CCC in the ovary and endometriosis with CCC( EAO).

**Results:** In non-atypical endometriosis, atypical and CCC cases groups there are significant differences on the percentage of ARID1A expression (Kruskal-Wallis test  $p=0,0035$ ). Post Hoc analysis were done using Mann-Whitney test and there are significant differences on ARID1A expression between non-atypical and atypical endometriosis with CCC ( $p=0,001$  and  $p=0,0015$ ). In non-atypical endometriosis, atypical and EAO groups there are significant differences on the percentage of ARID1A expression (Kruskal-Wallis test  $p=0,011$ ). Post Hoc analysis were done using Mann-Whitney test and there are significant differences on ARID1A expression between non-atypical and atypical endometriosis with EAO ( $p=0,005$  and  $p=0,008$ ).

**Conclusion:** Expression of ARID1A in non atypical and atypical endometriosis are significantly higher compared to ovarian CCC and EAO. So, we can say that ARID1A may be used as a marker for malignancy transformation in endometriosis.