

## Hubungan nilai agnor dengan derajat histopatologik tumor ovarium musinosum

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### Abstrak

Ruang lingkup dan cara penelitian: Karsinoma ovarium merupakan salah satu keganasan yang sangat penting karena menempati urutan ke empat penyebab kematian pada wanita. Di Indonesia dari tahun 1989-1992 terdapat 13% karsinoma ovarium dalam 1.726 kasus. Diagnosis histopatologik memegang peranan penting dalam penanganan tumor ovarium. Saat ini yang masih sering menimbulkan masalah diagnostik adalah membedakan antara tumor borderline dengan kistadenokarsinoma padahal penanganan dan prognostiknya berbeda. AgNOR merupakan salah satu cara penilaian proliferasi dengan menghitung nucleolar organizer region (NOR) yang merupakan lengkung DNA ribosom yang ditranskripsikan menjadi RNA ribosomal dengan bantuan RNA polimerase. Jumlah dan ukuran AgNOR berkorelasi dengan aktivitas proliferasi sel. Peningkatan nilai AgNOR mencerminkan peningkatan aktivitas proliferasi sel atau ploidi. Pada penelitian ini, nilai AgNOR digunakan untuk melihat hubungannya dengan derajat histopatologik tumor ovarium musinosum. Penghitungan nilai AgNOR dilakukan pada 20 kasus kistadenoma, 20 kasus tumor borderline dan pada 20 kasus kistadenokarsinoma dengan dua cara, yaitu rata-rata jumlah AgNOR per nukleus (mAgNOR) dan persentase nukleus dengan AgNOR>1, >2, >3 dan >4 (pAgNOR).

Hasil dan kesimpulan: Dari penelitian ini diperoleh nilai mAgNOR dan pAgNOR meningkat dan kistadenoma, tumor borderline dan kistadenokarsinoma (masing-masing 2,14; 3,55 dan 5,18). Nilai pAgNOR pada karsinoma lebih tinggi daripada nilai pAgNOR pada kistadenoma dan pada tumor borderline (pAgNOR>1 pada kistadenoma 69,55%; pada tumor borderline 964% dan pada kistadenokarsinoma 99,95%). Dengan menggunakan analisis varian didapatkan perbedaan bermakna di antara ke tiga jenis tumor tersebut ( $p=0,00$ ). Dan dengan uji korelasi diperoleh hubungan yang sangat kuat antara nilai AgNOR dan derajat histopatologik tumor ovarium musinosum. Hasil ini menunjukkan bahwa nilai AgNOR dapat digunakan untuk membedakan antara kistadenoma ovarium musinosum, tumor borderline dan kistadenokarsinoma.

.....Ovarian carcinomas are one of the most important malignant tumors because it had become the fourth most common cause of female cancer death. In Indonesia from 1989 to 1992, more than 13 % of 1.726 cancer cases were ovarian carcinomas. Histopathologic diagnostic become an important role in treatment of ovarian tumors. However, the main problem in histopathologic diagnostic the difficulties in differentiating ovarian cystadenocarcinomas and borderline tumors. Application of objective method is therefore necessary for the differential diagnosis. Nucleolar organizer region (NOR) are loops of DNA on the short arms of acrocentric chromosomes that presumably are associated with ribosomal RNA activity, protein synthesis and cellular proliferation. NOR are readily demonstrated by means of argyrophilia of their associated proteins, using the so-called AgNOR technique. Increased number of AgNOR may reflect increased proliferative activity of cell or ploidy, i.e., the count of AgNOR per nudeus was higher in malignant than in benign tissues. In this study, the authors tested AgNOR counting method for their ability to discriminate between benign tumour, borderline tumor and carcinoma and to see correlation between histopathologic grades of

mucinous ovarian tumors with AgNOR counts. Selective cases of 20 cases cystadenomas, 20 cases of borderline tumors and 20 cases of cystadenocarcinomas were evaluated by 2 AgNOR counting method: 1) the mean number of AgNORs per nucleus (mAgNOR) and 2) the percentages of nuclei with  $>1$ ,  $>2$ ,  $>3$  and  $>4$  AgNORs (pAgNOR $>1$ , pAgNOR $>2$ , pAgNOR $>3$  and pAgNOR $>4$ , respectively).

Result and conclusion: mAgNOR counts demonstrated a progressive increase from cystadenomas to borderline tumours and to cystadenocarcinomas (2,14; 3,55 and 5,18, respectively). pAgNOR counts were higher in carcinoma than in cystadenoma and in borderline tumors (in adenoma, 69,55% have pAgNOR $>1$ , while in borderline and in carcinoma were 96,1% and 99,55%, respectively). Using analysis of variance, both AgNOR counts enabled significant discrimination between cystadenoma, borderline tumours and carcinoma (13=0, 00). The AgNOR counts show statistically significant correlation with histopathological grade of mucinous ovarian tumors. The result indicates that the AgNOR counting procedure may be useful in distinguishing borderline tumours from cystadenocarcinoma and cystadenoma mucinous of ovary.