

Nilai diagnostik Elisa NMP-22 dan Elisa-UBC Urin pada pasien Karsinoma Kandung Kemih = Diagnostic value of Urine Elisa-NMP-22 and Elisa-UBC on Bladder Carcinoma patients / Thyrsa Laudamy Darmadi

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Abstrak

Karsinoma kandung kemih merupakan keganasan nomor empat terbanyak. Dampak beban ekonomi karsinoma kandung kemih cukup nyata, sehingga diperlukan deteksi dini keganasan kandung kemih untuk menurunkan beban ekonomi. Sistoskopi merupakan pemeriksaan baku emas untuk identifikasi karsinoma kandung kemih, tetapi pemeriksaan tersebut invasif dan menyebabkan ketidaknyamanan bagi pasien. Sitologi urin tidak invasif, tetapi hasilnya tidak bisa didapatkan dengan cepat dan terdapat ketergantungan interpretasi pemeriksa. Tujuan penelitian ini adalah untuk membandingkan nilai diagnosis dua penanda tumor, yaitu ELISA NMP-22, ELISA UBC urin, serta kombinasi keduanya pada pasien karsinoma kandung kemih. Penelitian uji diagnostik ini terdiri dari 25 orang pasien dengan indikasi sistoskopi dan trans ureteral resection bladder tumor (TUR-BT)/biopsi tumor. Pasien yang memenuhi kriteria masukan dan tolakan dilakukan pengambilan urin pasien kemudian dilakukan pemeriksaan ELISA NMP-22 dan ELISA UBC urin. Hasil pemeriksaan ELISA NMP-22 dan ELISA UBC urin akan dibandingkan dengan pemeriksaan sistoskopi disertai dengan hasil histopatologi. Pemeriksaan ELISA NMP-22 urin dengan cut-off 10 U/ml mempunyai sensitivitas 62,3% dan spesifisitas 83,3%, nilai prediksi positif 81,8% dan nilai prediksi negatif 71,4%, likelihood ratio positif 3,73 dan likelihood ratio negatif 0,45. Jika kasus sistitis dieksklusi maka didapatkan sensitivitas adalah 69,2%, spesifisitas 75%, nilai prediksi positif 81,8%, nilai prediksi negatif 60%, likelihood ratio positif 2,76, likelihood ratio negatif 0,42. Pemeriksaan ELISA UBC dengan cut-off 12 ug/L mempunyai sensitivitas 38,5% dan spesifisitas 91,7%, nilai prediksi positif 83,3% dan nilai prediksi negatif 57,9%, likelihood ratio positif 4,63 dan likelihood ratio negatif 0,67. Jika kasus sistitis dieksklusi maka didapatkan sensitivitas adalah 38,5%, spesifisitas 87,5%, nilai prediksi positif 83,3%, nilai prediksi negatif 46,7%, likelihood ratio positif 3,08, likelihood ratio negatif 0,70. Kombinasi pemeriksaan ELISA NMP-22 dengan UBC urin mempunyai sensitivitas 76,9% dan spesifisitas 75%, nilai prediksi positif 76,9% dan nilai prediksi negatif 75%, likelihood ratio positif 3,08 dan likelihood ratio negatif 0,31. Jika kasus sistitis dieksklusi maka didapatkan nilai sensitivitas adalah 78,5%, spesifisitas 71,4%, nilai prediksi positif 84,6%, nilai prediksi negatif 62,5%, likelihood ratio positif 2,74, likelihood ratio negatif 0,30. Kami menyimpulkan kombinasi pemeriksaan ELISA NMP-22 dengan ELISA UBC urin lebih baik karena mempunyai sensitivitas paling tinggi sehingga adanya tumor di kandung kemih baik primer maupun rekuren tidak akan luput dari diagnosis, meskipun harus dipastikan lagi dengan pemeriksaan sistoskopi.

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Bladder cancer is the fourth most common cancer. Bladder cancer possesses a significant economic burden so that early detection of bladder cancer may decrease the economic burden. Cystoscopy is the reference standard for identification of bladder carcinoma, but it is invasive and causes significant discomfort to the patient. Urinary cytology is noninvasive but time consuming and hampered by inter-observer variations. The aim of this study is to compare the diagnostic value of the urine NMP-22 ELISA test, UBC-ELISA test and

combination of both tests on suspect bladder carcinoma patients. This diagnostic study included 25 patients who were indicated for cystoscopy and trans urethral resection bladder tumor / tumor biopsy. From patients who met requirements for the inclusion and exclusion criteria, the urine voided sample was taken and used for NMP-22 ELISA test and UBC ELISA test. The results of NMP-22 ELISA test and UBC ELISA test were evaluated against the cystoscopy and histological findings as the reference standard. The result of diagnostic study of NMP-22 ELISA test with cut-off 10 U/ml showed that it had a sensitivity of 62,3% and a specificity of 83,3%, a positive predictive value of 81,8% and a negative predictive value of 71,4%, a positive likelihood ratio of 3,73 and a negative likelihood ratio of 0,45. If the cystitis case was excluded, it had a sensitivity of 69,2%, and a specificity of 75%, a positive predictive value of 81,8%, and a negative predictive value of 60%, a positive likelihood ratio of 2,76, and a negative likelihood ratio of 0,42. Diagnostic value of UBC ELISA test with cut-off 12 ug/L had a sensitivity of 38,5% and a specificity of 91,7%, a positive predictive value of 83,3% and a negative predictive value of 57,9%, a positive likelihood ratio of 4,63 and a negative likelihood ratio of 0,67. If the cystitis case was excluded, it had a sensitivity of 38,5%, and a specificity of 87,5%, a positive predictive value of 83,3%, and a negative predictive value of 46,7%, a positive likelihood ratio of 3,08, and a negative likelihood ratio of 0,70. Diagnostic value of combined NMP-22 ELISA test with UBC ELISA test had a sensitivity of 76,9% and a specificity of 75%, a positive predictive value of 76,9% and a negative predictive value of 75%, a positive likelihood ratio of 3,08 and a negative likelihood ratio of 0,31. If the cystitis case was excluded, it had a sensitivity of 78,5%, and a specificity of 71,4%, a positive predictive value of 84,6%, and a negative predictive value of 62,5%, a positive likelihood ratio of 2,74, and a negative likelihood ratio of 0,30. The conclusion was that the combined NMP-22 ELISA test with UBC test had the highest sensitivity, thus it would not miss any primary or recurrent tumour in the bladder, although this needed to be confirmed by cystoscopy.