Asosiasi jenis kelamin dan status merokok terhadap mutasi epidermal growth factor receptor pada pasien adenokarsinoma paru stadium lanjut = Association of gender and smoking status to epidermal growth factor receptor mutation in advanced lung adenocarcinoma patients

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Abstrak

Latar Belakang: Mutasi Epidermal Growth Factor Receptor (EGFR) merupakan prediktor keberhasilan terapi TKI pada non-small cell lung cancer (NSCLC). Ras Asia, perempuan, bukan perokok, tipe histologis adenokarsinoma adalah karakteristik klinikopatologis yang diketahui memiliki asosiasi dengan mutasi EGFR pada NSCLC. Di Indonesia belum pernah dilakukan penelitian yang membuktikan asosiasi tersebut di tengah keterbatasan sumber daya dan fasilitas pemeriksaan biomolekuler untuk medeteksi mutasi EGFR.
Metode: Desain studi adalah potong lintang. Subjek dikumpulkan secara konsekutif dari pasien adenokarsinoma paru stadium lanjut Rumah Sakit Umum Pusat Nasional Cipto Mangunkusumo dan Rumah Sakit Dharmais Pusat Kanker Nasional yang memeriksakan status mutasi EGFR di Laboratorium Kalbe Genomics dalam kurun waktu Januari 2010 hingga Desember 2013. Dari rekam medis pasien ditelusuri data umur, jenis kelamin, status merokok, diagnosis dan status mutasi EGFR. Uji chi-square dilanjutkan regresi logistik digunakan untuk menilai asosiasi jenis kelamin dan status merokok terhadap status mutasi EGFR.
Hasil: Studi melibatkan 51 subjek dan didapatkan proporsi mutasi EGFR sebesar 47,1% (IK 95% = 33,4% – 60,8%). Uji bivariat menunjukkan perempuan (RO=4,80; IK 95%=1,12-20,61) dan bukan perokok (RO=4,00; IK 95%=1,23-13,06) memiliki asosiasi dengan mutasi EGFR, namun pada uji multivariat hanya status bukan perokok yang masih bermakna (RO=4,00; IK 95%=1,22-13,06).
Simpulan: Proporsi mutasi EGFR pada kelompok pasien adenokarsinoma paru stadium lanjut 47,1%. Hanya status bukan perokok yang memiliki asosiasi independen dengan mutasi EGFR.
<hr><i>Background: Epidermal Growth Factor Receptor (EGFR) mutation is predictor for successful TKI therapy in non-small cell lung cancer (NSCLC) patient. Asian, women, non-smoker, and histology of adenocarcinoma are the clinicopathological characteristics associated with EGFR mutation in NSCLC patient. In Indonesia, no research has been performed to confirm association between those characteristics while the resources and facilities to detect EGFR mutation are lacking.
Method: A cross sectional study was performed in Cipto Mangunkusumo National Referral Hospital and Dharmais Hospital National Cancer Center from January 2010 to December 2013. Subjects were collected consecutively from advanced lung adenocarcinoma patients who underwent examination for EGFR mutation in Kalbe Genomics Laboratory during study period. From medical records, information about age, gender, smoking status, diagnosis, and EGFR mutation status were collected. Chi square and logistic regression analysis were performed to assess association between variables.
Results: From 51 subjects participated in this study, proportion of EGFR mutation was 47.1% (CI 95% = 33,4% – 60,8%). Bivariate analysis revealed that women (OR=4,80; CI 95%=1,12-20,61) and non-smoker (OR=4,00; CI 95%=1,23-13,06) were associated with EGFR mutation. While in multivariate analysis, non-smoker status was the only significant clinical factor associated with EGFR mutation (OR=4.00; CI 95%=1.22-13.06).

Conclusion: Proportion of EGFR mutation in advanced lung adenocarcinoma patients is 47,1%. Non-smoker status is the only clinical factor associated with EGFR mutation.</i>