INTISARI

Latar Belakang : Kanker kolorektal menjadi kasus keganasan nomor tiga terbanyak di dunia setelah kanker paru dan payudara. Demikian juga di Indonesia, kanker kolorektal menjadi kasus keganasan ketiga terbanyak setelah kanker payudara dan paru. Salah satu mekanisme penyebab kanker kolorektal adalah instabilitas mikrosatelit yang diperkirakan terjadi pada sekitar 15% dari keseluruhan kasus kanker kolorektal. MLH1, gen yang memiliki peran memperbaiki kesalahan saat proses replikasi DNA, berperan penting dalam mekanisme instabilitas mikrosatelit. Jalur ini memiliki ciri-ciri klinikopatologis yang berbeda dari jalur instabilitas kromosom. Secara histopatologis, lebih dari 90% kasus kanker kolorektal merupakan adenokarsinoma. Penelitian mengenai profil kejadian instabilitas mikrosatelit di Indonesia masih sangat minim jumlahnya.

Tujuan : Mengkaji hubungan instabilitas mikrosatelit, yang ditunjukkan dengan ketiadaan ekspresi protein MLH1, dengan gambaran klinikopatologis pasien adenokarsinoma kolorektal.

Metode : Rancangan penelitian adalah *cross-sectional* menggunakan 49 sampel blok parafin jaringan adenokarsinoma kolorektal di RSUP Dr. Sardjito pada periode tahun 2010-2016. Data klinikopatologis yang digunakan adalah usia, jenis kelamin, lokasi kanker, stadium, kedalaman tumor, dan derajat diferensiasi. Ekspresi protein MLH1 ditentukan dengan teknik pewarnaan imunohistokimia. Hasil tersebut dianalisis untuk dikaji hubungan antara hilangnya ekspresi protein MLH1 dengan parameter klinikopatologis pasien.

Hasil : Hilangnya ekspresi protein MLH1 pada sampel sebanyak 51,02% (25 dari 49). Tidak ditemukan hubungan yang signifikan secara statistik antara ekspresi protein MLH1 dengan usia ($p = 0,074$), jenis kelamin ($p = 0,062$), lokasi kanker ($p = 0,111$), stadium ($p = 0,464$), kedalaman tumor ($p = 0,158$), dan derajat diferensiasi ($p = 0,193$).

Kesimpulan : Tidak terdapat hubungan antara hilangnya ekspresi protein MLH1 dengan parameter klinikopatologis, seperti usia, jenis kelamin, lokasi kanker, stadium, kedalaman tumor, dan derajat diferensiasi pasien adenokarsinoma kolorektal pada penelitian ini.

Kata Kunci : adenokarsinoma kolorektal - instabilitas mikrosatelit – MLH1 – usia – jenis kelamin – lokasi kanker – stadium – kedalaman tumor – derajat diferensiasi

ABSTRACT

Background : Colorectal cancer is the third most common malignancy in the world, after lung cancer and breast cancer. Similar situation is also found in Indonesia. Colorectal cancer is being ranked as the third most common malignancy, after breast cancer and lung cancer. One of mechanisms tought to be causing colorectal cancer is microsatellite instability that happens approximately 15% of the total colorectal cancer cases. MLH1 gene, that specialty in repairing DNA mistakes during the replication process, has taken up an important role in microsatellite instability mechanism. This pathway has distinct clinicopathological features that are different from chromosomal instability pathway. Histopathologically, more than 90% colorectal cancer cases are adenocarcinoma. Studies about microsatellite instability incidence in Indonesia are still very limited in number.
Objective : To study the association between microsatellite instability, shown by loss of MLH1 expression, and clinicopathological features in patients with colorectal adenocarcinoma.
Methods : This was a cross-sectional study using 49 paraffin-embedded blocks from patients with colorectal adenocarcinoma in RSUP Dr. Sardjito within 2010-2016 period. Clinicopathological data that were used in this study includes age, sex, localization, stage, depth of tumor invasion, and histopathological grading. MLH1 expressions were determined by immunohistochemistry staining. Those results were analyzed to study the association between loss of MLH1 expression and clinicopathological features.
Result : Loss of MLH1 expressions were found in 51,02% (25 out of 49) samples. There were no statistically significant relationships between loss of MLH1 expression and age (p-0,074), sex (p = 0,062), localization (p = 0,111), stage (p = 0,464), depth of tumor invasion (p = 0,158), and histopathological grading (p = 0,193).
Conclusion : There were no relationship found between loss of MLH1 expression and clinicopathological, such as age, sex, localization, stage, depth of tumor invasion, and histopathological grading of colorectal adenocarcinoma patients in this study.
Keywords : colorectal adenocarcinoma – microsatellite instability – MLH1 – age – sex – localization – stage – TX – histopathological grading