

Profil Asam Amino pada Kanker Payudara = Profile of Amino Acids in Breast Cancer

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Abstrak

Latar Belakang: Sel kanker membutuhkan asam amino untuk metabolismenya telah ditemukan pada beberapa studi. Metabolisme ini menyebabkan profil asam amino mengalami perubahan pada kanker payudara. Profil asam amino pada kanker payudara ini dapat menentukan prognosis penyakit pada kanker payudara.

Tujuan: Mengetahui hubungan profil asam amino dengan faktor risiko kanker payudara di RS Ciptomangunkusumo, Indonesia.

Metode: Penelitian ini merupakan penelitian cross-sectional pada 19 subjek kanker payudara dan 19 subjek kontrol yang memenuhi kriteria penelitian di RSCM, Jakarta, Indonesia. Asam amino dianalisis menggunakan teknik liquid chromatography. Data tersebut dianalisis menggunakan uji independent sample t-test dan uji Mann-Whitney U.

Hasil:

Perbedaan profil asam amino pada kanker payudara yang signifikan dibandingkan dengan kontrol ditemukan pada peningkatan asam amino sistin dan penurunan asam amino valin, lisin, histidin, alanin, ornitin, tirosin, glutamin, fenilalanin, dan asam amino prolin. Terdapat signifikansi antara asam amino dengan faktor risiko usia, jumlah paritas, riwayat pemberian ASI, usia menarke, dan kebiasaan berolahraga.

.....Background: Cancer cell needs amino acids for its metabolism has been found in recent studies. Amino acids profile changes due to cancer cells' metabolism. This amino acids profile in breast cancer could determine the prognosis of disease in breast cancer.

Objective: To aimed relationship between amino acids profile in breast cancer with its risk factor in Ciptomangunkusumo Hospital, Indonesia.

Method: A cross-sectional study in 19 breast cancer subjects and 19 control subjects that included into the criteria was conducted in this research. Amino acids was examined with liquid chromatography technique. The data was analyzed with independent sample t-test and Mann-Whitney U test.

Result: There are significant differences of amino acids profile between breast cancer subjects and control subjects, essentially for increased cystine profile and decreased valine, lysine, histidine, alanine, ornithine, tyrosine, glutamine, phenylalanine, and proline. There are also significance between amino acids profile in breast cancer with risk factors, including age, parity, breastfeeding history, menarke age, and workout habit.