Pengaruh nutrisi protein hewani dan nabati pada pertumbuhan tumor transplantabel kelenjar susu mencit C3H Role of animal and plant protein nutrition on the growth of mammary transplantable tumor in C3H mice

Robert Gandasentana, author

Abstrak

ABSTRAK
Ruang Lingkup dan Cara Penelitian: Frekuensi kanker payudara dipengaruhi oleh diit, yang mungkin mengandung karsinogen; kokarsinogen ataupun promotor pembentuk kanker. Frekuensi kanker payudara pada golongan masyarakat yang banyak memakan daging sapi dan babi lebih tinggi daripada golongan vegetarian.

Penelitian ini untuk melihat pengaruh protein hewani dan nabati pada pertumbuhan tumor transplantabel kelenjar susu mencit. Digunakan 54 ekor mencit betina hibrid Fl (CRS x C3H;, umur 5 - 10 minggu, yang sebagian diberi diit protein hewani 30%, sebagian lagi diberi diit protein nabati 30%, dan sebagian lagi dengan diit protein campuran 15% (protein hewani 1% dan protein nabati 14%) sebagai kelola. Diinokulasi dengan bubur tumor 0,2 cc subkutan pada daerah aksila kanan, Pertumbuhan tumor diukur dengan" kaliper 3 kali setiap minggu sampai mencit mati atau dimatikan; setelah mencit mati massa tumor diukur volumenya dengan gelas ukur dan beratnya dengan timbangan gram.

Hasil dan-Kesimpulan: Semua tumor transplantabel pada ketiga kelompok mencit tumbuh. Pertumbuhan tumor pada ketiga kelompok diit sejak awal transplantasi sampai minggu ketiga masih sama, tetapi mulai minggu ketiga pada kelompok diit nabati pertumbuhannya menjadi lebih lambat dibandingkan dengan kelompok mencit lainnya. Ternyata tidak terdapat perbedaan bermakna di antara ketiga kelompok tersebut (uji anova: p =0,05). Hal ini mungkin disebabkan karena konsentrasi protein nabati sebesar 30% belum cukup menghambat pertumbuhan tumor. Oleh karena itu perlu penelitian lebih lanjut dengan melakukan inokulasi sel tumor hidup dalam jumlah yang sama dan meneliti peran metionin pada pertumbuhan tumor.
<hr><i>ABSTRACT
Scope and Method of Study: The frequency of mammary cancer is influenced by the diet, which may contain carcinogen, cocarcinogen or cancer promotor. The frequency of mammary cancer in a community, which consumes a lot of beef and pork, is higher than those in vegetarian group.

This study is conducted to look at the role of animal and plant protein in the growth of mammary transplantable tumor in mice. Fifty-four female mice of F1 hybrid (GRS x C3H), age 8 - 10 weeks, were used in this study. The mice were divided into 3 groups, the first and second group was given 30% animal and plant protein, respectively, while the third as control group was given mixed protein diet (animal protein 1% and plant protein 14%). The mice were inoculated with 0,2 cc mashed tumor subcutaneous at the right axilla. The growth of tumor was measured with acaliper, 3 times a week, till the mice died or terminated. The volume of the tumor mass was measured using a measuring glass and weighted on a- balance.

Findings and Conclusions: The tumor transplantation in the three groups of mice showed the same rate of growth from the first week of inoculation up to the third week. After the third week, however, the tumor in the group with plant protein diet grew slower compared to the other two groups. But there was no significant difference among the three groups (anova test, p? > 0.05). This may be due to the fact that the 30% concentration of plant protein was not sufficient to inhibit the tumor growth. A further study is suggested, using the same number of live tumor cells for inoculation and the role of methionine on tumor growth.</i>