Pengaruh pemberian kurkumin kadar tinggi terhadap faktor angiogenik vegf pada kultur jaringan kanker payudara MCF-7 = The influence of high concentration of curcumin towards vegf level as and angiogenic factor in tissue culture of breast cancer cell line MCF -7

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Abstrak

ABSTRAK
Latar Belakang: Kanker payudara adalab salab satu kanker yang paling sering terjadi pada wanita. Dalam perkembangannya, sel kanker payudara membutubkan vsairularisasi baru. Sel kanker mampu menginisiasi pembentukan pembulub darab baru bagi dirinya sendiri dengan cara mengubah keseimbangan antara faktor proangiogenik dan antiangiogenik. Kurkumin adalab molekul yang pleiotropik, dapat memodulasi berhagai target pada sel kanker, tennasuk aktivasi berbagai faktor transkripsi, reseptor, protein kinase, reseptor, sitokin, enzim dan faktor pertumbuban yang diperlukan dalam pertumbuhan sel kanker payudara. Tujuan: Untuk mengetabui pengaruh pemberian kurknmin kadar tinggi temadap kadar VEGF pada kultur jaringan sel kankar payudara MCF-7. Metode: subkultur jaringan kanker payudara MCF-7 dalam medium RPMI komplit+ FBS I 0% sejumlah 9 sampal tiap kelompok perlakuan. lnkubasi 72 jam. Cairan kultur diambil, kadar VEGF diperilc!a secara kuantitatif dengan ELISA. Basil: kadar VEGF kelompok MCF-7+kurknmin O,OSmM berbeda bermakua dengan kadar VEGF kelompok MCF-7 tanpa kurkumin (1'= 0,0 14). Kadar VEGF kelompok perlakuan MCF-7+kurknmin O,lmM juga berbeda bermakua dibandingkan dengan kelompok MCF-7 tanpa kurknmin (1'=0,001). Namun kadar VEGF kelompok MCF-7+kurkumin 0,05mM jika dibandingkan dengan kelompok MCF-7+kurkumin O,lmM tidak berbeda bermakua (1'=0,262). Kesimpulan: Kurkumin kadar O,05 mM dan 0,1 mM dapat menurunkan kadar VEGF pada kultur jaringan kanker payudara MCF-7. Kurkumin kadar 0,05 mM dan O,1 mM dapat menghambat proliferasi sel yang diikuti dengan penurunan kadar total VEGF pada kultur jaringan kanker payudara MCF-7.
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Abstract
Background: Breast cancer is one of the most prevalent cancer in women. In order to grow, the tumor cells require new vascularization, New vascularization is initiated by the tumor cells themselves by recruitment of their own blood supply by shifting the balance between proangiogenic and antiangiogenic factors. Curcumin is a p1eiotropic factor which can modulate various targets on cancer celts, including activation of transcription fuctors, receptors, protein kinase&, cytokines, enzymes, and growth factors needed for breast cancer cells' growth. Objective: To identify the influence of high dose curcumin towards VEGF level in breast cancer cell line MCF-7. Method: In this study, breast cancer cell line MCF-7 was subcultured in complete RPM! medium + FBS 10%, with 9 samples for each treatment group; then incubated for 72 hours. VEGF concentration was measured with ELISA from the supernatant of the cell culture. Result: The VEGF levels of both MCF-7 + curcumin 0.05 mM treatment group and MCF-7 + curcumin 0.1 mM treatment group are significantly lower than the VEGF level of MCF-7 without curcumin treatment group (p = 0.014 and p = 0.001). The VEGF level of MCF-7 + curcumin 0.05 mM treatment group is not significantly different from the VEGF level of MCF-7 + curcurnin 0.1 mM treatment group (p = 0.262). Conclusion:

Corcurnin dose of 0.05mM and O.lmM lower the VEGF level in breast cancer cell line MCF-7. Corcurnin dose of 0.05 mM and 0,1 mM lower !he proliferation of breast cancer cell line MCF-7.