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山奈酚治療肺癌以及作為放射增敏劑之探討

Enhanced the Radiosensitivity by Kaempferol in Human Lung Cancer Cells

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中文摘要

根據過去的研究報告指出，山奈酚可以誘發癌細胞凋亡，但是從沒有任何一篇報告探討過山奈酚與放射線之間的交互作用。因此本研究將以山奈酚合併放射治療來探討相關的機轉以及其訊息傳遞路徑。為了模擬臨床上的藥物測試，我們選用非小細胞肺癌A549作為這次實驗的主要細胞。由實驗結果我們發現，山奈酚治療A549非小細胞肺癌會導致凋亡、抑制肺癌細胞存活路徑、對放射線有增敏的作用、照完放射線之後抑制PI3K以及ERK的蛋白表現，因此，我們相信山奈酚具有發展成為一個放射增敏劑的潛力。

關鍵詞：山奈酚，放射治療，放射增敏劑，肺癌，細胞凋亡

Abstract

Previous researches have shown that kaempferol can induce cell apoptosis (programmed cell death) and inhibited the survival pathway in A549 lung cancer cells. To imitate clinical treatment, A549 NSCLC cells, stand for the classic form of the lung cancer. In summary, treatment of A549 cells with kaempferol resulted in (i) induce cell apoptosis (ii) inhibit the cell survival pathway (iii) enhance the radiosensitivity (iv) down-regulation of PI3K and ERK protein after irradiation. Based on these results, we suggested that kaempferol possess the ability to be a radiosensitizer in the near future.

Keywords: Kaempferol, radiotherapy, apoptosis radiosensitizer, lung cancer