Melanoma

Studies have shown that berberine is able to trigger apoptosis in different malignant cell lines, and can also lead to cell cycle arrest at sub-apoptotic doses. In these melanoma cell lines, berberine at low doses (12.5–50 μM) is concentrated in mitochondria and promotes G1 arrest. In contrast, higher doses (over 50 μM) result in cytoplasmic and nuclear berberine accumulation, and G2 arrest. DNA synthesis is not markedly affected by low doses of berberine, but 100 μM is strongly inhibitory. Even at 100 μM, berberine inhibits cell growth with relatively little induction of apoptosis.

Source:

Berberine reduced the basal levels as well as PGE2-stimulated expression levels of EP2 and EP4. Berberine inhibited the activation of nuclear factor-kappa B (NF-κB), an upstream regulator of COX-2, in A375 cells, and treatment of cells with caffeic acid phenethyl ester, an inhibitor of NF-κB, inhibited cell migration. Together, these results indicate for the first time that berberine inhibits melanoma cell migration, an essential step in invasion and metastasis, by inhibition of COX-2, PGE2 and PGE2 receptors.

Source:

Emodin and rhein at a daily dosage of 50 mg/kg markedly inhibited the growth of melanoma. The percentages of inhibition were 76 and 73%. Emodin and rhein also inhibited the growth of mammary carcinoma and Ehrlich carcinoma (ascitic form) respectively. Rhein showed no definite antitumor effect on sarcoma 180 and Ehrlich carcinoma (solid form).

Source: