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• 中文摘要

行政院衛生署統計民國九十一年國人十大死因排名第一名爲惡性腫瘤，且惡性腫瘤已連續蟬連二十一年榜首，而肝癌更位居所有癌症死亡原因第一位，因此肝癌的治療成爲國內重點研究之一。許多的植物中草藥早已在中國傳統用藥中作爲保肝、抗癌及提升免疫能力之用，且也有文獻探討這些植物中草藥所含多醣體爲其有效成分。以兩種中草藥多醣包括：枸杞多醣(Lycium barbarum polysaccharides; LBP)與地黃多醣(Rehmannia glutinosa polysaccharide; RPS)，分別以不同劑量添加於老鼠(H-4-II-E)與人類 (HA 22T/VGH)肝癌細胞以 MTS 分析試劑組測量細胞數目，以反應肝癌細胞增殖情形。結果顯示在給予 LBP 0.2 mg/mL 共同培養 12 小時後，發現較其他濃度有明顯抑制 H-4-II-E 之細胞增殖率(77.68% ±13.99%)。在給予 LBP 0.5 mg/mL 共同培養 24 及 48 小時後，結果顯示較第 12 小時有降低細胞增殖率(86.33% ±21.9%及 93.8% ±4.85% vs. 115.79% ±9.68%)(；另外在給予 RPS 0.05 mg/mL 共同培養 24 及 48 小時後，結果顯示較第 12 小時有降低細胞增殖率(91.85% ±7.36%及 100.25% ±9.37% vs.116.46% ± 9.97%)。在給予 LBP 0.5 mg/mL 共同培養 24 小時後，結果發現較其他濃度有明顯抑制 HA 22T/VGH 之細胞增殖率(62.69% ± 10.13%)；給予 LBP 0.5 mg/mL 共同培養 48 小時後，結果較其他濃度有明顯抑制細胞增殖率(82.45% ±10.59%)；對於 RPS 0.5 mg/mL 而言，在共同培養第 24 小時後，結果顯示與控制組降低細胞增殖率(70.5% ±7.67%)；若培養 48 小時後降低細胞增殖率達 76.02% ±6.07%。在給予 LBP 0.5 mg/mL 共同培養 24 小時後，抑制細胞增殖情形較培養 48 及 72 小時後效果較好；而 RPS 0.5 mg/mL 也具有相同結果。由本研究發現枸杞多醣與地黃多醣可分別抑制老鼠(H-4-II-E)與人類(HA 22T/VGH)肝癌細胞之增殖。

- 英文摘要

The Department of Health reported that malignant tumor is the first place of death causes in 2002, and it has been twenty-one years at the first place. Among cancers, hepatocellular carcinoma (HCC) is the first place of death causes. Therefore, the therapy for HCC is one of the most important research focuses. Many of Chinese herbal had been used as Chinese traditional medicine on liver protection, antitumor, and improve immune functions. Also there are lots of researches reported that the main effective functions of Chinese herbal is polysaccharides. An in vitro study was conduced to investigate the effects of Lycium barbarum polysaccharides (LBP) and Rehmannia glutinosa polysaccharide (RPS) on cell proliferation of hepatoma cells. After adding different concentrations of these Chinese herbal polysaccharides described above in rat (H-4-II-E) and human (HA 22T/VGH) hepatoma epithelial cells, cell proliferation was measured by using MTS assay kit. The results showed that cell proliferation (77.68% +- 13.99%) of H-4-II-E cells was significantly inhibited by incubation with LBP (0.2 mg/mL) for 12 h. LBP (0.5 mg/mL) after 24- and 48-h incubation significantly decreased cell proliferation (86.33% +- 21.9% and 93.8% +- 4.85% vs. 115.79% +- 9.68%) of H-4-II-E cells compared with that after 12-h incubation. Additionally, RPS (0.05 mg/mL) after 24- and 48-h incubation significantly decreased cell proliferation (91.85% +- 7.36% and 100.25% +- 9.37% vs. 116.46% +- 9.97%) of H-4-II-E cells compared with that after 12-h incubation. LBP (0.5 mg/mL) significantly inhibited cell proliferation (62.69% ？H？H 10.13% and 82.45% +- 10.59%) of HA 22T/VGH cells after 24- and 48-h incubation compared with other concentration of LBP. RPS (0.5 mg/mL) significantly inhibited cell proliferation (70.5% +- 7.67% and 76.02% +- 6.07%) of HA 22T/VGH cells after 24- and 48-h incubation compared with the control group. Both LBP and RPS (0.5 mg/mL) after 24-h incubation significantly decreased cell proliferation of HA 22T/VGH cells compared with that after 48- and 72-h incubation. In conclusion, Lycium barbarum polysaccharides (LBP) and Rehmannia glutinosa polysaccharide inhibited cell proliferation in both rat (H-4-II-E) and human (HA 22T/VGH) hepatoma epithelial cells.