Virgin olive oil phenolic extract inhibit invasion of HT116 human colon cancer cells in vitro and in vivo (Article)


Abstract

The dietary intake of extra virgin olive oil (EVOO) may be due to the presence of polyphenols, which can modulate pathways including apoptosis and invasion that are relevant to its management. We have previously shown that virgin olive oil polyphenol extract (VPE) inhibited invasion of HT116 colorectal cancer cells in vitro. Here, we explore the potential effects of VPE on HT116 cell migration, spreading and integrin expression. Furthermore, the antiremodeling activity of VPE was confirmed by western blotting and visualization. In addition, VPE treatment significantly reduced cell spreading on fibronectin (14% of control p < 0.05) and expression of β5 integrin (13% of control p < 0.05) was modulated. In vivo, VPE treatment significantly (p < 0.05) decreased invasion in mice and also inhibited metastasis in mice. This journal is © The Nutrition Society 2014.