The Radioprotective Effects of Bu-Zhong-Yi-Qi-Tang as a Prescriptions of Traditional Chinese Medicine in Irradiated Mice

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We performed this study to determine the effect of Bu-Zhong-Yi-Qi-Tang, as a prescription of traditional Oriental medicine, and its major ingredients on jejunal crypt survival, endogenous spleen colony formation, and apoptosis in jejunal crypt cells of mice irradiated with high and low dose of γ-radiation. Bu-Zhong-Yi-Qi-Tang administration before irradiation protected the jejunal crypts ($p<0.0001$), increased the formation of endogenous spleen colony ($p<0.05$) and reduced the frequency of radiation-induced apoptosis ($p<0.05$). In the experiment on the effect of ingredients of Bu-Zhong-Yi-Qi-Tang, the result indicated that the extract of Rensan (Panax ginseng), Danggui (Radix Angelicae sinensis), Shengma (Rhizoma Cimicifugae) and Chaihu (Radix Bupleuri) might have a major radioprotective effect. Although the mechanisms of this inhibitory effect remain to be elucidated, these results indicated that Bu-Zhong-Yi-Qi-Tang might be a useful radioprotector, especially since it is a relatively nontoxic natural product. Further studies are needed to characterize better the protective nature of Bu-Zhong-Yi-Qi-Tang extract and its ingredients.