

عنوان مقاله:

Histopathological evaluation of radiation pneumonitis and fibrosis in rats lung

محل انتشار:

نهمین کنگره بین المللی سرطان پستان (سال: 1392)

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خلاصه مقاله:

Irradiation to lungs is inevitable in patients with thorax and chest wall malignancies including breast , lung ,esophagus ,lymphomas or any other mediastinal neoplasms.Radiation induced lung injuries were divided into two distinct phase .Acute syndrome considered as early transient pneumonitis which appears about 1-6 months after radiation therapy. Chronic syndrome develops pulmonary fibrosis which occurs month to years after radiotherapy. Radiation pneumonitis is an exudative inflammation which refer to interstitial edema and presence of inflammatory. Cell. fibrosis is a result of chronic inflammatory and considered as a dose limiting side effect in radiotherapy. Fibrosis reduces the elasticity of organs and small molecule distribution across membrane resulting in organ lesions. In this study, we investigated acute and chronic changes in irradiated lung using 12 and 18 Gy x radiation.Material and Methods:thirty eight male wistar rats divided into three groups: group1considered as control group. Group 2 underwrent 12 Gy thorax radiotherapy. Group 3 underwent 18Gy thorax radiotherapy. histopathological evaluationwas done 48 hours and 8 weeks after radiotherapy.Results:In acute phase both of radiaton groups showed significant increase in factors including collapse, fibrosis and lymphocyte compare with control group($p<0.05$). there was a significant increase in intraalveolar edema in 18Gy radiation group compare with 12Gy radiation group($p<0.05$). In chronic phase there were significant increase in factors such as collapse, hyaline arteriosclerosis, fibrosis,macrophage and lymphocyte for both radiation goups compare with control group($p<0.05$). Also , there were a significant diffrence in RBC and edema between 18Gy group and control group($p<0.05$).considering diffrences between 12 and 18 Gy groups, there were significant increase in neutrophil, RBC, edema, hyaline arterisclerosis, fibrosis and macrophage in 18Gy group compare with 12Gy group.Disscussion:Results confirm that the dose of radiation delivered to the lung is a critical factor in chronic radiation-induced lung injury. The development of fibrosis as a long term injury that compromise lung function is mediated by radiation pneumonitis. The optimal treatment for radiation-induced lung injury is not known, so, there is a need to search radioprotective agent for the protection of normal tissues from the toxic effects of . radiotherapy

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

