

**Radioprotective Effect of Malva ~~sylvestris-sylvestris~~ L. against Radiation-induced Liver, Kidney, and Intestine Damages in Rat: A Histopathological Study**

<https://www.sciencedirect.com/science/article/pii/S2405580823000365#:~:text=Conclusion,lesser%20extent%2C%20in%20the%20intestine>.



**Abstract**

**Background:** Ionizing radiation (IR) is widely used in the treatment of cancer in radiotherapy. One of the main concerns of patients with gastrointestinal cancers undergoing radiotherapy is the harmful side effects of IR on normal tissues. The liver, kidney, and duodenum are usually exposed to high doses of radiation in the treatment of some cancers in abdominal region radiotherapy. We aimed to assess the radioprotective effects of Malva sylvestris L. against IR ~~damaging-damages to~~ the abdominal region.

**Materials and Methods:** This current study was conducted on 45 rats divided randomly into ~~9-nine~~ groups of five ~~rats~~: A-) negative control group, B-) sham group, C-) irradiation group, D-) mallow treatment-1(200gr/kg), E-) mallow treatment-2(400gr/kg), F-) mallow treatment-3(600gr/kg), G-) mallow treatment-4(200gr/kg) plus irradiation, H-) mallow treatment-5(400gr/kg) plus irradiation, I-) mallow treatment-6(600gr/kg) plus irradiation. Irradiation was performed with a 6Gy x-ray. Histopathological evaluations were performed 10 days after irradiation.

**Results:** The histopathological examination results confirmed that preventive therapy with the effective dose of mallow reduced the liver, kidney, and intestine damage induced by radiation. The dose of 400 mg/kg was more effective than other selected dose in improving the damage caused by irradiation in the studied tissues.

**Conclusion:** This study concludes that Malva sylvestris L. ~~has-contributed to~~ significant improvements in radiation-induced histological parameters of the liver and kidney and, to a lesser extent, in the intestine. These results collectively indicate that mallow is an effective radioprotective agent.

**Keywords:** Malva sylvestris L; Histopathology; Radiation-Protective Agents; Radiation Injuries