PATIENTS GETTING RADIOTHERAPY FOR LUNG CANCER MAY DEVELOP RADIATION-INDUCED ESOPHAGITIS

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Introduction. Radiation-induced esophagitis is characterized by inflammation of the esophagus resulting from radiation exposure, commonly occurring in patients undergoing radiation therapy for malignancies such as lung cancer, breast cancer, and various lymphomas. This adverse effect typically manifests two to three weeks following the initiation of treatment and is associated with symptoms including odynophagia, dysphagia, and the sensation of food impaction within the esophagus. Acute radiation-induced esophagitis was assessed using the acute esophagitis toxicity criteria established by the Radiation Therapy Oncology Group (RTOG).

Aim of the study. Evaluate factors exacerbating esophagitis based on tumor localization and treatment regimen.

Materials and methods. Retrospective analysis of outpatient records from Grodno City Clinical Hospital No3. Data processed using Microsoft Excel, Fisher's exact test calculator.

Results and discussion. This study, conducted from March to September 2024, included 15 male patients (mean age: 66.3 years) diagnosed with non-small cell lung cancer (NSCLC) treated with volumetric modulated dynamic irradiation. Tumors were peripheral in 3 patients and central in 12. Cancer staging identified 3 patients with stage I, 1 with stage II, and 11 with stage III disease. All patients received proton pump inhibitors (PPIs) and antacids post-radiation to prevent esophagitis, yet symptoms were observed per the Radiation Therapy Oncology Group (RTOG) scale. No cases of grade 4 or 5 esophagitis occurred. Among central tumors, 1 patient had grade 1, 10 had grade 2, and 1 had grade 3 esophagitis. Peripheral tumors resulted in 2 cases of grade 1 and 1 of grade 2. Three patients with central tumors developed ipsilateral atelectasis, and PET imaging was used to refine gross tumor volume (GTV). Seven patients received classical fractionation, 2 underwent 60 Gy (2 Gy/day) with concurrent chemoradiotherapy, and 5 received 66 Gy (2 Gy/day). Hypofractionation was used for patients with comorbidities or lower ECOG performance status. Patients with atelectasis had more severe esophagitis (grade 2). Esophagitis onset occurred at 18-20 Gy in classical fractionation and 18-21 Gy in hypofractionation. Central tumors showed

greater esophagitis severity, especially at doses of 18-20 Gy. Fisher's exact test found no significant differences in esophagitis severity between fractionation regimens ($p>0.5$).

Conclusion. Tumor location was the primary factor influencing esophagitis severity. Literature suggests patient somatic status and irradiated volume also impact outcomes. Conventional fractionation with lower single doses did not mitigate esophagitis severity compared to hypofractionation.

ЛИТЕРАТУРА

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COMORBIDITIES ASSOCIATED WITH ACETONEMIC VOMITING

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Introduction. Acetonemic vomiting is also called cyclic vomiting syndrome (CVS), caused due to the synthesis of acetone,characterized by repeated episodes of vomiting.CVS was first desribed in 1806 by Heberden and then by Gee in St.Bartholomew's Hospital reports. The presentation can vary depending on the child's age, past medical history, current state of hydration, serum glucose and electrolyte levels. Untreated acetonemic vomiting can cause dehydration in children, while prolonged acetonemic vomiting causes damage to the esophagus and tooth destruction due to its corrosive nature.

Aim of the study. Target is analyze comorbidities associated with acetonemic vomiting in children.

Materials and methods. This data was collected from the electronic medical records of 37 patients from Grodno Regional Children's hospital (2021-2024). Inclusion criteria was children presenting with acetonemic vomiting aged 1-15 years.

Results and discussion. It was found that, out of these 37 patients, 24 (64.9%) were males commonly aged 5 years and 13 (35.1%) out of them were females commonly aged 4 years. It was evident that 28 patients who presented with acetonemic vomiting had a history of acute gastritis, in which 17 (60.7%) were males and majority of them were between 1 and 4 years, while 11(39.3%) of them were females predominantly aged 5 and 7 years. 18 patients (49%) had associated comorbidities from acute infections to chronic diseases (Bronchial asthma, atopic dermatitis, allergic