عنوان مقاله:

Radiation Induced Demyelination in Cervical Spinal Cord of the Head and Neck Cancer Patients after Receiving Radiotherapy

محل انتشار:

مجله فیزیک و مهندسی پزشکی, دوره 10, شماره 1 (سال: 1399)

تعداد صفحات اصل مقاله: 6

نویسندگان:

H Goyal - *MD, Department of Radiotherapy, Government Medical College & Hospital, Kota, India*

N Singh - *PhD, Department of Radiotherapy, King George Medical University, Lucknow, India*

O P Gurjar - *PhD, Government Cancer Hospital, Mahatma Gandhi Memorial Medical College, Indore, India*

R K Tanwar - *MD, Department of Radiotherapy, Government Medical College & Hospital, Kota, India*

خلاصه مقاله:

Background: Cervical spinal cord is important and radiosensitive. It is the most critical organ for the head and neck (H&N) cancer patients during radiotherapy. If the delivered dose to the cord is more than tolerance dose, demyelination may occur. Objective: Current study aims to analyze the post radiotherapy status of cord in the H&N cancer patients.Material and Methods: In this analytical study, sixty patients who received more than ۵۰ Gray (Gy) dose for more than ۱۰ cm length of spinal cord participated in the study. All the patients were clinically examined and magnetic resonance imaging (MRI) was performed for patients who had demyelination symptoms. Adequate medical management was provided for all the patients having demyelination. Results: Out of sixty patients, ten cases were reported with demyelination symptoms, and only six cases gave consent for this study. One patient was found to have irreversible demyelination while five patients had reversible demyelination. Conclusion: Demyelination may occur if long segment spinal cord receives dose more than tolerance limit. However target dose should not be compromised up to ۵۴ Gy to spinal cord.

کلمات کلیدی:

Spinal cord, Demyelination, Myelin, Radiotherapy, Magnetic Resonance Imaging