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Improving Functionality of Radiotherapy Department Through: Systemic Periodic Clinical Audits

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Abstract : INTRODUCTION: As complexity in radiotherapy practice and processes are increasing, there is a need to assure quality control to a greater extent. At present, no international literature available with regards to the optimal quality control indicators for radiotherapy; moreover, few clinical audits have been conducted in the field of radiotherapy. The primary aim is to improve the processes that directly impact clinical outcomes for patients in terms of patient safety and quality of care. PROCEDURE: A team of an Oncologist, a Medical Physicist and a Radiation Therapist was formed for weekly clinical audits of patient's undergoing radiotherapy audits The stages for audits include Pre planning audits, Simulation, Planning, Daily QA, Implementation and Execution (with image guidance). Errors in all the parts of the chain were evaluated and recorded for the development of further departmental protocols for radiotherapy. EVALUATION: The errors at various stages of radiotherapy chain were evaluated and recorded for comparison before starting the clinical audits in the department of radiotherapy and after starting the audits. It was also evaluated to find the stage in which maximum errors were recorded. The clinical audits were used to structure standard protocols (in the form of checklist) in department of Radiotherapy, which may lead to further reduce the occurrences of clinical errors in the chain of radiotherapy. RESULTS: The aim of this study is to perform a comparison between number of errors in different part of RT chain in two groups (A- Before Audit and B-After Audit). Group A: 94 pts. (48 males,46 female), Total no. of errors in RT chain:19 (9 needed Resimulation) Group B: 94 pts. (61 males,33 females), Total no. of errors in RT chain: 8 (4 needed Resimulation) CONCLUSION: After systematic periodic clinical audits percentage of error in radiotherapy process reduced more than 50% within 2 months. There is a great need in improving quality control in radiotherapy, and the role of clinical audits can only grow. Although clinical audits are time-consuming and complex undertakings, the potential benefits in terms of identifying and rectifying errors in quality control procedures are potentially enormous. Radiotherapy being a chain of various process. There is always a probability of occurrence of error in any part of the chain which may further propagate in the chain till execution of treatment. Structuring departmental protocols and policies helps in reducing, if not completely eradicating occurrence of such incidents.

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