

عنوان مقاله:

Quality Control Status of Radiology Centers of Hospitals Associated with Mashhad University of Medical Sciences

محل انتشار:

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خلاصه مقاله:

Introduction Using ionization radiation for diagnostic and treatment fields has increased worldwide dramatically. This issue causes an increase in the absorbed and collective doses in society noticeably. With regard to two main principles in radiation protection, i.e., justification and optimization, it is necessary to have imaging process with minimum dose to patients and personnel. For achieving this, it is vital to perform quality control tests regularly. On this topic, many studies have been performed and reported worldwide which show necessities and meaningfulness of QC tests. Materials and Methods In this study, Unfors Mult-O-Meter model 303 is used for surveying accuracy of kVp and time, linearity of exposure with mAs, and reproducibility of exposure. Results According to recommendations of AAPM (2002) and ICRP 103, in this study, 27% of apparatuses in accuracy of kVp, 45% in accuracy of timer, and 30% in accuracy of reproducibility were out of accepted range. Conclusion In surveyed apparatuses, both ends of operating range have large errors in therefore it is recommended that these devices should not be used in the mentioned regions. Performing strict quality control on all radioactive devices is one of the radiation protection priorities that should be done periodically. With regard to the results, repair, substitution or omission of some devices are suggested.

کلمات کلیدی:

Mult-O-Meter, Quality Control, Radiography, Reproducibility of Results

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