



Estimation of eye absorbed doses in head & neck radiotherapy practices using thermoluminescent detectors

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Abstract

Determination of eye absorbed dose during head & neck radiotherapy is essential to estimate the risk of cataract. Dose measurements were made in 20 head & neck cancer patients undergoing ⁶⁰Co radiotherapy using LiF(MCP) thermoluminescent dosimeters. Head & neck cancer radiotherapy was delivered by fields using SAD & SSD techniques. For each patient, 3 TLD chips were placed on each eye. Head & neck dose was about 700-6000 cGy in 8-28 equal fractions. The range of eye dose is estimated to be (3.49-639.1 mGy) with a mean of maximum dose (98.114 mGy), which is about 3 % of head & neck dose. Maximum eye dose was observed for distances of about 3 cm from edge of the field to eye.

Keywords: patient exposures, radiotherapy doses, scattered radiation, TLD, cataract.

For full article, refer to the Persian section