

عنوان مقاله:

Assessment of Patient Absorbed Radiation Dose during Hysterosalpingography: A Pilot Study in Southwest Nigeria

محل انتشار:

مجله فیزیک و مهندسی پزشکی، دوره 10، شماره 2 (سال: 1399)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

Background: Hysterosalpingography (HSG) is an indispensable tool for diagnosing infertility in females. The procedure exposes female reproductive organs to ionizing radiation as the genitals are irradiated during the process. Investigating patient absorbed dose during the procedures is essential for effective radiological protection of the patient. Objective: This study aims to investigate the radiation dose received by patient during HSG examination in the study environment in order to enhance optimization of procedures and the associated dose, thereby minimizing radiation risks. Material and Methods: The prospective pilot study, was conducted in four tertiary healthcare institutions in Southwest Nigeria. Thermoluminescence dosimeter (TLD ۱۰۰) was used to determine the Entrance Surface Dose (ESD) of ۸۰ patients presented for HSG investigation. The corresponding effective dose, ovary, uterus and urinary bladder doses were evaluated using PCXMC software. Results: The mean entrance surface doses (ESD) obtained from the four centers were ۱۸.۵۸ ± ۶.۳۱ mGy, ۱۵.۱۸ ± ۲.۲۷ mGy, ۱۷.۴۴ ± ۳.۴۳ mGy and ۳۴.۲۴ ± ۱۱.۹۸ mGy for SW₁, SW_۲, SW_۳ and SW_۴ centers, respectively. The corresponding mean of effective doses were ۱.۵۴ ± ۰.۶۳ mSv, ۱.۲۴ ± ۰.۲۸ mSv, ۱.۴۱ ± ۰.۳۰ mSv and ۲.۵۳ ± ۰.۹۴ mSv for SW₁, SW_۲, SW_۳ and SW_۴ centers, respectively. The resulting mean doses to the ovary, urinary bladder and uterus were also presented. Conclusion: The results obtained in general are comparable with international standards. It was, however, recommended that study centers with high doses should .conduct dose audit in order to enhance patient safety

کلمات کلیدی:

Hysterosalpingography, Thermoluminescence Dosimeters, Entrance Surface Dose, Effective Dose, Organ Doses, Radiation protection, Patient Safety

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