EVALUATION OF AXILLARY DOSE OF CARDIOLOGIST DURING CORONARY ANGIOGRAPHY (CA) AND PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY (PTCA) PROCEDURES: A CATH LAB STUDY

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Coronary Angiography (CA) and Percutaneous Transluminal Coronary Angioplasty (PTCA) are catheterization imaging procedures involving high radiation doses. The aim of this study was to measure the absorbed dose receives in the axillary region among cardiologists who wear a lead apron with inappropriate size. This was a quantitative cross-sectional study, which includes the date from 40 PTCAs and 80 CAs. The data were collected from National Hospital of Sri Lanka (NHSL). Two electronic pocket dosimeters were placed in the axillary area (inside and outside the lead apron) of the cardiologist, which was used to measure scattered and leakage radiation during imaging procedures. PTCA and CA median axillary dose without and with shielding was 25.84 μSv, 0.64 μSv and 9.37 μSv, 0.64 μSv. A significant difference was observed between with and without shielding. First operator will receive annum dose with respect to the without and with shielding to axilla 13.88 mSv and 0.85 mSv respectively, 93.9% of reduction was observed. Among PTCA and CA procedures, a significant association was found between exposure time and axillary dose, DAP and axillary dose with and without shielding and also between DAP and BMI. No significant association was observed among PTCA and CA procedures between BMI and axillary dose with or without shielding.Shielding of the axillary area will reduce the radiation dose significantly to the first operator and furthermore the DAP, exposure time and patient's BMI are the main factors that contribute to the radiation dose to the axillary region.

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