- 

SS 3.6 (1150-1200)

A100339

RADIATION EXPOSURE FROM RETROSPECTIVE 64-SLICE ECG GATED COMPUTED TOMOGRAPHY ANGIOGRAPHY FOR INTERMEDIATE CARDIOVASCULAR RISK PATIENTS

Silviu STANCIU[1], Cristina ENCIU[1], Florin NAFTANAILA[1], Lidia DOBRESCU[2];
[1].Central University Military Hospital, Bucharest, Romania ,[2].University Politehnica Bucharest, Romania

Background: Computed tomography angiography (CTA) is a good alternative to the current gold standard-invasive coronarography for the evaluation of the atherosclerotic burden and the assessment of the calcified plaques (Agatston calcium score) with benefit recognized for the intermediate cardiovascular risk patients. In our cardiology department we perform either only calcium score or a retrospective, 64-slice ECG gated study and radiation exposure is a main concern for our patients, because many of these studies are followed by an invasive exam with stent placement.

Objective: We have retrospectively analyzed the CT angiography exams performed during the past 4 years in our department for a better description and understanding of the radiation received by our patients, expressed through dose-length product (DLP) - absorbed dose and for whom we calculated the effective dose, the participants being enrolled in a prospective long term radiation effect investigation.

Materials and Methods: Data from 99 CTA studies were analyzed with a clear predominance of male patients (74 -75%) with a mean effective dose of 17,15 mSV± 3,13 mSv. Women received lower radiation effective dose : 16,86 mSv ± 2,03 CI [16,06-17,66] when compared to men 17,25 ± 3,43 CI [16,49- 18,01], values consistent with data available in literature. None of the patients had any malignancy since the beginning of the investigation.

Conclusion: DLP and the effective dose received by the patient during a tomography scan are a main concern taking into accounts the risk for radiation-induced malignancy with repeated exposure. All the patients whose data were analyzed were enrolled for a perspective follow-up study for the assessment of medium term cumulative effect of the irradiation.

The results were obtained from the SRSPIRIM project in Romanian Partnerships Program, Collaborative Applied Research Projects Subprogram.