RADIATION INDUCED LENS OPACITIES IN THE EYES OF CATH LAB STAFF

i2 Poster Contributions
Georgia World Congress Center, Hall B5
Monday, March 15, 2010, 9:30 a.m.-10:30 a.m.

Session Title: Intravascular Diagnostics and Complex Lesions
Abstract Category: Imaging in the Cath Lab; Angiography & QCA
Presentation Number: 2503-450

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Background: Staff working in cath lab, pre-dominantly interventional cardiologists (IC) use relatively higher amount of radiation and face risk of cataract after several years of work if radiation protection tools are not properly used. A number of studies in populations other than interventional cardiologists such as astronauts, atomic bomb survivors and those exposed in Chernobyl accident have shown increased risk of subcapsular posterior lens opacities. This creates interest in interventional cardiologists.

Methods: The study was conducted during the annual conference of the National Heart Association of Malaysia on 17-19 April 2009 and covered ICs, nurses and technicians and control group of cardiologists attending the conference who were not involved with radiation work.

Results: A total of 125 persons (56 ICs, 14 nurses and technologists and 55 controls) underwent eye examination. Participation was voluntary with informed consent. This is the first Asian site to contribute to the study coordinated by the International Atomic Energy Agency, Vienna. Cataract staging was scored in situ after eye dilatation with a slit dedicated system, using Merriam-Focht score. Opacities were observed in 52% of ICs (age 41±8 years), 43% of nurses and technical staff (age 38±11 years) and 21% of age matched control group (age 43±9 years). The chi-square gave significant difference for interventional cardiologists, but not for nurses and technicians as the sample size was small. Further analysis is ongoing to estimate the radiation doses and correlate opacities with dose.

Conclusions: Increased incidence of posterior subcapsular changes consistent with radiation exposure were observed in statistically significant manner in interventional cardiologists and this calls for further investigation.