AUDIT OF RADIATION DOSE TO THE PATIENTS DURING CORONARY ANGIOGRAPHY

Interventional cardiology examinations involve the diagnosis of complex coronary conditions. As a consequence coronary angiography can involve extended fluoroscopy times as well as the acquisition of a large number of images. The clinical requirements of these examinations often require the cardiac X-ray equipment to be operated in high dose-rate mode so that the image quality is adequate for diagnosis.\(^1\)

The number and frequency (head of population) of diagnostic cardiology examinations (coronary angiograms) have increased in recent years in most countries and health care systems. The increase is due to the combined effects of an increase in coronary heart disease in the population and from an increasing awareness of the many benefits of X-ray guided interventional cardiology procedures. Interventional cardiology can be used both as a diagnostic tool or as a treatment for coronary heart conditions which would previously have required open heart surgery. The patient benefits from having a procedure with less trauma.

The growth in X-ray guided interventional cardiology procedures poses a number of important radiation protection questions and raises some concerns regarding the relatively high radiation doses associated with coronary angiography when compared with other fluoroscopy procedures. It is important to regularly monitor and audit dose levels in coronary angiography. This is particularly important as deterministic injuries have been reported in both patients and staff.\(^2-6\) These radiation injuries stimulated the interest of the International Commission in Radiological Protection who have developed guidance in
minimising dose levels for interventional cardiology.

It is therefore important to undertake audits of dose levels in interventional cardiology, as there are relatively few publications in this area. It is also necessary to estimate the number of frequency of interventional coronary procedures, so that the population dose can be estimated.

In this month's journal, an audit of radiation dose to patients during coronary angiography is published. This is an interesting report, as it is based upon a recent survey. It contributes to the published literature on dose levels in interventional cardiology and underlines the importance of radiation protection audits in all health care systems.

REFERENCES


K. FAULKNER
Quality Assurance Reference Centre, Unit 9, Kingfisher Way, Silverlink Business Park, Wallsend, Tyne and Wear, NE28 9ND, UK.
E-mail: keith.faulkner@nhs.net