Knowledge of Quality Assurance and Quality Control in Mammography; A Study among Radiographers of Mammography Settings in Sri Lanka

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Abstract : Mammography is used as a screening tool for early diagnosis of breast cancer. It is also useful in refining the diagnosis of breast cancer either by assessment or work up after a suspicious area in the breast has been detected. In order to detect breast cancer accurately and at the earliest possible stage, the image must have an optimum contrast to reveal mass densities and spiculated fibrous structures radiating from them. In addition, the spatial resolution must be adequate to reveal the suffusion of micro calcifications and their shape. The above factors can be optimized by implementing an effective QA programme to enhance the accurate diagnosis of mammographic imaging. Therefore, the radiographer's knowledge on QA is greatly instrumental in routine mammographic practice. The aim of this study was to assess the radiographer's knowledge on Quality Assurance and Quality Control programmes in relation to mammographic procedures. A cross-sectional study was carried out among all radiographers working in each mammography setting in Sri Lanka. Pre-tested, anonymous self-administered questionnaires were circulated among the study population and duly filled questionnaires returned within a period of three months were taken into the account. The data on demographical information, knowledge on QA programme and associated QC tests, overall knowledge on QA and QC programmes were obtained. Data analysis was performed using IBM SPSS statistical software (version 20.0). The total response rate was 59.6% and the average knowledge score was 54.15 ± 11.29 SD out of 100. Knowledge was compared on the basis of education level, special training of mammography, and the years of working experience in a mammographic setting of the individuals. Out of 31 subjects, 64.5% (n=20) were graduate radiographers and 35.5% (n=11) were diploma holders while 83.9% (n=26) of radiographers have been specially trained for mammography and 16.1% (n=5) have not been attended for any special training for mammography. It is also noted that 58.1% (n=18) of individuals possessed their experience of less than one year and rest 41.9% (n=13) of them were greater than that. Further, the results found that there is a significant difference ($P < 0.05$) in the knowledge of QA and overall knowledge on QA and QC programme in the categories of education level and working experience. Also, results imply that there was a significant difference ($P < 0.05$) in the knowledge of QC test among the groups of trained and non-trained radiographers. This study reveals that education level, working experience and the training obtained particularly in the field of mammography have a significant impact on their knowledge on QA and QC in mammography.

Keywords : knowledge, mammography, quality assurance, quality control
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