

Research Article

Informing Patients About the Cancer Induction Risk of Undergoing Computed Tomography Imaging: The Radiographers' Perspective

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ABSTRACT

Aims: In the midst of debates about the actual risk posed from computed tomography (CT) imaging, there is a general consensus that patients have a right to information. Despite this, communication of the potential cancer induction risk from CT scans is poor, leading to poor patient awareness. Without adequate awareness of any significant risks patients might be deprived of the opportunity to take part in their own care and, therefore, the opportunity for patient-centered care is missed. The aims of this study were to determine whether CT radiographers provide patients with information about cancer induction risks from CT scans and the rationale for their practices.

Methodology: A qualitative constructivism philosophical approach was taken. Online data collection tools in the form of questionnaires and one-to-one semistructured interviews were used. CT radiographers from five hospitals in the Greater London (the United Kingdom) region took part in the study.

Results: The sample size for the survey and interviews were 38 and eight, respectively, and the response rate was 33.63%. In the study, 63.16% of participants informed their patients of the cancer induction risk "sometimes." Ultimately, five main concepts that influence communication practices were identified: anxiety, knowledge, time or workload, perceived professional responsibility, and the patients' right to information. Anxiety was found to facilitate and hinder communication.

Discussion and Conclusion: The results from this study outline that CT radiographers took a passive approach to risk communication more often than not. Their reasons loosely focused on not wanting to discourage patients from having scans, a lack of time and a large gap in radiation risk knowledge.

In conclusion, CT radiographers may need to take a more active approach to providing patients with information about the potential radiocarcinogenic risk if truly patient-centered care is to be realized.

RÉSUMÉ

Buts : Dans tout le débat qui entoure le risque réel posé par l'imagerie par tomodensitométrie, il existe un consensus sur le droit à l'information des patients à l'information. Malgré cela, la communication du risque de cancérogénicité des examens de TDM se fait mal, conduisant à une faible prise de conscience des patients. Sans une prise de conscience adéquate de tout risque significatif, les patients pourraient être privés de l'occasion de participer à leur propre traitement, conduisant ainsi à faire manquer l'occasion d'appliquer les soins centrés sur le patient. Cette étude visait à déterminer si les radiographes en TDM fournissent aux patients de l'information sur les risques de cancérogénicité de l'imagerie TDM et sur la justification de leurs pratiques.

Méthodologie : Une approche philosophique de constructivisme qualitatif a été adoptée. Des outils de collecte de données en ligne, un questionnaire et des entretiens personnalisés semi-structurés, ont été utilisés. Des radiographes en TDM de cinq hôpitaux de la grande région de Londres (Royaume-Uni) ont participé à l'étude.

Résultats : La taille de l'échantillon pour le questionnaire et les entretiens était respectivement de 38 et de huit, avec un taux de réponse de 33,63%. Dans l'étude, 63,16% des participants ont « parfois » informé leurs patients des risques de cancérogénicité. En fin de compte, cinq concepts principaux ayant une incidence sur les pratiques de communication ont été recensés: l'anxiété, les connaissances, le temps/charge de travail, la perception de responsabilité professionnelle et le droit du patient à l'information. Les répondants indiquent que l'anxiété peut autant nuire à la communication que la faciliter.

Discussion et conclusion : Les résultats de cette étude montrent que les radiographes en TDM adoptent la plupart du temps une approche passive face à la communication des risques. Les motifs invoqués vont de ne pas vouloir décourager les patients de subir l'examen, un manque de temps et de grandes lacunes dans la connaissance du risque radiologique. En conclusion, les radiographes en TDM pourraient avoir besoin d'adopter une approche plus active dans la fourniture aux patients d'information sur le risque de radio-cancérogénicité pour atteindre une véritable pratique de soins centrés sur le patient.

Keywords: CT; risk communication; cancer risk; radiographer practices; radiation technologist practices

Conflicts of Interest: There are no conflicts of interest.

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Introduction

Due to its speed, reliability, and ease of access, computed tomography (CT) is now heavily utilized in clinical imaging for the purposes of diagnosis, surveillance, and treatment planning for an extensive range of pathologies. Major concerns have been raised because of the potential increase in long-term radiocarcinogenesis, with some authors drawing conclusions that diagnostic use of CT may be contributing to a significant number of deaths every year [1, 2]. A popular approach to the model of “patient-centered” care requires health professionals to provide patients with information [3], including those related to risks; thus, the need to inform patients of potential cancer-inducing risk from CT is pertinent.

The concept of patient-centered care has led to an influx of patient-centered health policies, reforms, and initiatives by national and international health-related organizations [3–6]. The general consensus of these organizations is that patients have an ethical and legal right to take part in decisions about their care [3–5, 7]. The emphasis has explicitly been placed on the need for patients’ input in their own care; the concept of “no decision about me without me” [7].

Despite these efforts, a UK national inpatient survey found that 20% of patients felt that they received too little or no information at all about their care [8]. In relation to CT examinations, reports indicated that patients are poorly informed of the radiation risks associated with CT scans [9]. This inevitably deprives patients of the right to take an active part in their own care. Since carcinogenesis caused by ionizing radiation is life-threatening [1, 2], it would be prudent to actively provide risk information. That said, it must be acknowledged that there are valid reasons against general disclosure of potential risks associated with CT, and the debate continues within the radiology community. For instance, the risk of cancer is dependent on dose, duration of exposure and age group [9]; variables that differ greatly among CT patients, making it difficult to produce accurate, generalized risk information for individual patients. Another setback is the lack of large-scale CT studies with life-long follow-up, which would provide the data needed to determine cancer risk more accurately [1].

Anecdotally, it is not common practice in the United Kingdom for CT radiographers to volunteer information about the cancer-inducing properties of ionizing radiation. In addition, there is the view that some of the responsibility for risk communication may lie with other professionals; particularly the referring clinician. Nevertheless, CT radiographers, like all professionals, reserve their right to autonomic professional judgment and practice. The decision on whether to provide patients with specific information is not often based on rigid policy requirement but a combination of protocol, experience, critical reasoning, sense of responsibility, and perceptions. Thus, to understand the significant factors at play, it is necessary to explore the radiographers’ reasoning and perceptions that drive communication practices.

By gaining a better understanding of what communication practices radiographers observe and their perceptions on what factors influence their decisions, it may be possible to enhance practice and nurture effective communication where it is lacking.

Aims and Objectives

The aims of this research were to:

- Determine whether CT radiographers provide patients with information about cancer induction risks from CT scans and the rationale for their practices.

The objectives of the research were to:

- Critically analyze published literature to determine what factors might influence radiographers’ communication practices.
- Undertake a survey and interviews to determine if CT radiographers provide patients with information about the potential risk of cancer induction associated with CT scans.
- Critically appraise how different factors influence radiographers’ decisions whether to inform patients of cancer induction risks from CT scans.
- Construct themes from critically analyzed qualitative data.
- Use emerging themes to recommend changes that may enhance awareness and communication of the cancer induction risk from CT scans.

Methodology

A constructivist paradigm was chosen to allow exploration of the influential factors of communication as perceived by CT radiographers themselves. To enable the collection of both quantitative and qualitative data, the study took a mixed data collection approach. The first phase was a questionnaire survey followed by interviews to elicit greater understanding. A review of relevant literature was also conducted and used to triangulate findings.

Ethical approval was attained from the Kingston University’s Health, Social Care and Education Faculty Research Ethics Committee. Participants consented to the study by making a selection on the introductory page of the questionnaire and by making a statement of confirmation in chat windows for interviews. The voluntary nature of the study was emphasized, and participants were given an opportunity to withdraw their consent within a considerable time frame. The population of 113 included all diagnostic radiographers working within five National Health Service hospitals in Greater London who are authorized to undertake CT imaging. Students and qualified radiographers undertaking CT training were excluded from the study. This was because the responsibility of communicating risk may be shared with other colleagues or completely outside their scope of practice.

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