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SHORT COMMUNICATION

Audit of radiology request forms –“Are they adequately filled?”

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Abstract

The easiest and best way of communication between the clinician and radiologist is the radiograph request form. The physician seeking answers from the radiologist should give his questions and relevant clinical data on the request form. Such a dialogue helps in diagnosis and patient management effectively. The present communication is an attempt to outline the adequacy of information on the request forms in different modalities in various hospitals from the published literature. The aim of this presentation is to review the completeness and usefulness of the request forms for imaging from the literature. Clinical diagnosis and clinical details were not given in as many as 50 % of the forms. It was observed that patients' age and sex were not mentioned in a significant number of requests. In a sizeable number of the forms, the hand writing was not legible and unacceptable abbreviations were used in majority of the forms. From a review of the above findings, it became evident that the radiological investigation request forms are inadequately filled thus increasing the limitation of the radiologist to give an appropriate report.

Keywords : Radiology Request Forms; Radiation; CT Scan; MRI

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Introduction

In today's medical practice, imaging plays a major role in patient management with the ready availability of revolutionary technology. However interpretation of the results depends on the background knowledge of the patient. The reason and justification for the investigation should be indicated on the request form. This input is essential to the radiologist from the clinician. Though there are no uniform standard request forms, each hospital adapts its own version suitable for appropriate referral. Inadequate or incomplete information on the request form takes away much of the time of radiologist in searching or imagining the clinical condition of the patient. Besides the full demographic data of the patient

such as the name, age, sex, address including the telephone number, date, the form should show the name and signature of the referring physician. This is helpful to contact the physician for discussion on the clinical issues and even to locate the patient if not yet shifted to the imaging department. Guidelines from American College of Radiology and Royal College of Radiology are available for adaptation and standardization in order to give less unhelpful results and reports and to deliver health care more efficiently.

Results and discussion

Incomplete and inappropriate requests for radiological investigations are a wasted exercise and create scope for error with resultant unnecessary repetitions and radiation to the patient. Literature survey reveals a large number of studies addressing adequacy of filling of radiology request forms [1-4]. Common faults in filling the requisition forms were analyzed by Jumah et al. and recommended necessary steps to correct [5]. With the growing concern for increasing radiation exposure, compliance rate and justification for the requests were audited in University Teaching Hospitals and General Practitioner referral patterns [6, 7]. Adequacy of clinical information from accident and emergency (A&E) department was audited by the Royal College of Radiologists Research Group [8].

While evaluating the quality of radiology requisitions for intensive care unit patients Cohen et al. noted shortcomings in documentation and communication resulting in poorer outcomes [9]. It is also observed in almost a third (30%) of all radiological requests were made by doctors who have had no clinical contact with the patient and as such, there is a real risk that standards of patient care and safety have fallen [10].

Physician's signature and patient's location in the hospital were not mentioned in more than 50% of the requests. It necessitates the radiologist to search for the required clinical information from bulky patient file which is not only time consuming but also a vain exercise often. Often the progress sheet is not in the

serial order in the file and the physician concerned is unknown to be contacted over telephone. The problem is compounded by unavailability of previous imaging investigations. It is a common practice to send the patient for immediate Ultrasonography or CT scanning from the accident & emergency before clinical details are written in the file. Without a caution to the radiologist regarding the patient's clinical condition on the request form such as a suspected tracheoesophageal fistula following irradiation, the patient is at risk for aspiration of barium when swallowed on the radiograph table. Similarly an MRI is more appropriate to evaluate female pelvis and the investigation may be best advised by the radiologist if the request form is not sent without clinical details for a CT scan examination.

The referring physician may address the need and timing of the investigation. Sometimes he or she may realize the investigation had been done already from another hospital or outpatient or A&E. It is prudent for the clinician to ask himself if the problem was clearly expressed in the form and to confirm with the radiologist if this is the best investigation. Patient may not get what you request if appropriate clinical information is not given or a wrong investigation is asked for. An anticipated positive finding on imaging may be clinically or therapeutically irrelevant, for example a fracture of rib or degenerative spinal disease and the investigation will be of no consequence.

From the observations in this review, a need arises to design the request forms in an appropriate format in order to obtain relevant information from the clinicians. Reject Request Form philosophy should be implemented to improve the referral pattern as per acceptable norms and standards. It would be possible by scrutinizing the request forms by an experienced radiologist before accepting for the investigation.

In the interest of patient safety, the department of health, UK Government has issued clear guidelines regarding the requesting of radiological investigations. The legislation, 'Ionizing Radiation (Medical Exposure) Regulations (IRMER)' states

that when requesting a radiological investigation, the referrer (clinician) is required to provide sufficient and accurate clinical information for the IRMER practitioner (radiologist/radiographer) to be best able to determine whether the examination is appropriate and justified [11]. This clearly states that the referrer (clinician) has a responsibility to provide accurate and necessary information to the radiological practitioner, who is then responsible for determining if the request is appropriate. It is therefore clear that the referrer must have sufficient data regarding the patient to ensure that any exposure of patients to radiation is justified and the investigation appropriate. As a result, the clinician may expect the right answers in the report to his questions. This is applicable to non-ionizing radiological investigations as well.

A more recent cross sectional survey clearly demonstrated in almost a third of radiological requests, doctors have not seen patients to be investigated. This is most likely due to the shift working patterns [12]. Moreover the IRMER 2000 criteria are not satisfied potentially exposing patients to unnecessary and inappropriate radiation. Another study documented 24% of inappropriate requests in their study of Radiology Referral forms appropriateness using 'The American College of Radiology (ACR) Appropriateness Criteria for Imaging and Treatment Decisions' [13].

There are ways of improving the system of referral pattern to improve safety and reduce clinical errors. During induction the junior doctors should be oriented in order to know the importance of accurate patient information and the adverse effects of unnecessary radiation exposure [14-17]. Inclusion of certain mandatory fields in the request forms (e.g. creatinine, referring doctor, etc.), will necessitate the ordering physician to fill the details without fail.

Conclusions

Output from the radiologist will be in tune with the input from the referring clinician. Compliance with filling of the request forms is low as shown from the analysis of the audits in the literature. There is a

need to redesign the request forms to provide more space for important fields to include clinical details, physician's name, previous investigations etc. The radiology request forms should be reviewed by radiologists regularly to optimize the investigations and avoid unwarranted radiation. A comprehensive imaging request guidelines supported by the clinical appropriateness guidelines should be circulated to all the physicians.

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