

Subtle versus the obvious - “Is it time for the *Smart Radiologist?*”

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With the great ability to “heal” and save human lives comes the responsibility and expectations bestowed upon medical professionals by the society. We try our best to maintain the highest standards in our work but being humans we are also bound to falter at times. Gone are the days when doctors could claim immunity under the shield of our “noble” profession. Modern medicine with its emphasis on evidence-based approach and easy access to medical information our work and decisions are being constantly scrutinized. This has been particularly amplified by instances of malpractice by a few elements, which have led to a gradual deficit in the trust between the doctor and the patient.

The Hippocratic Oath teaches us to be ethically responsible for our duties. The doctor–patient relationship is an unwritten agreement which bounds us to discharge our duties in the most sacred manner. The patient confides in the doctor about his illness, trusting the capabilities of the doctor. We must maintain the highest standards of privacy as well as treat our patients with dignity and empathy. Along with this, reference to a subspecialty radiologist should be encouraged rather than looked down upon. While the patient or attendants may try to influence us by various means for any act, we must be vigilant to guard our ethical and legal boundaries.

The radiologist also needs to ensure the radiation safety of the patient who in most cases is unaware of the potential hazards. This is especially important for pregnant females and children. The radiologist must ensure that all standards, as advised by the regulatory bodies, are fulfilled along with proper maintenance of all the equipment in sound condition. Rigorous training and continued education of the staff must be undertaken as the department staff are the people who interact with the patient directly. The protection of the staff from radiation hazard is also the responsibility of the radiologist. The subspecialty of intervention radiology, in particular, is more and more akin to a surgical specialty where the duties of the radiologist are even stricter for not just the diagnosis but also therapy and post-therapeutic care.

For sure, a number of steps can be taken to safeguard ourselves such as taking a second opinion, suggesting additional imaging, taking relevant clinical background

into account, and comparison with previous imaging. Further, obtaining informed consent, proper maintenance of imaging and procedural records, and following the standard protocols can be helpful. Effective and prompt communication with our physician friends also has a significant role in preventing misunderstandings and future litigation. However, at the center of the litigation problem lies the lesion which just escapes the eye or the “missed” lesion which every radiologist is terribly afraid of.

Similar to other medical specialties, radiology is also liable to claims of malpractice due to diagnostic errors. Under the Consumer Protection Act (CPA), doctors are classified as “service providers” while the patients are the “consumers.” The problem here is that, unlike most other specialties, radiology report is documented and easily reproducible, and hence it leads to retrospective scrutiny and puts the onus on the radiologist to have missed the finding in the first place. While gross errors in interpretation are unacceptable and should be punished, herein lays a very important dilemma of whether to classify a “missed” radiological finding as acceptable or unacceptable. In other words, there is the big problem of defining the radiologist’s competence considering the vast set of radiologists with variable acumen and work experience. In a previous judgement, the honorable Supreme Court stated that the standard to be applied for judging negligence or otherwise would be that of an ordinary competent person exercising ordinary

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skill in that profession. The honorable court ruled that every professional is not expected to possess the highest level of expertise or skills in the branch which he/she practices. A highly skilled professional may possess better qualities, but that cannot be made the basis or the yardstick for judging the performance of the professional for indictment of negligence.^[1]

Most times, the competence issue is delegated to expert committees. However, even this definition of “ordinary competence” is fairly debatable among the radiology community. A radiologist working in a primary care setup may be regarded as very competent, whereas the same person may be noncompetent in a tertiary setup with more skilled radiologists. Putting in simple words, there is a very fine line between decide the difference between perceptual error and incompetency of radiologist. For most of the litigation cases, the public and media sentiment is mostly against the medical community.

With the advent of PC-PNDT act, there is a steady increase in litigation against radiologists. A radiologist missing a lesion is treated like a criminal who is either fined or pronounced professional punishment. This brings to light a very important issue which is imbibed into us since the beginning of our radiology training. We are taught that “obvious lesions everyone can see, the good radiologist is one who picks up the subtle lesion.” Is this subtle lesion a good yardstick to decide the competency of a radiologist who in most cases has dedicated a major chunk of his/her life to acquire skills in our beloved specialty? This is one of the biggest dilemmas that we need to soul-search for. From the beginning of a student’s career in radiology to passing the certification exams, we are screening between the subtle and obvious category, the fine lines of which are not definable. To compound the problem, the same radiologist who failed to pick the “subtle” lesion in a case may have picked up many “subtle” lesions in the past or even in other cases on the same day.

A similar statement was echoed in a malpractice claim against a radiologist over missing a subtle lesion. It ruled that an “average” radiologist was expected to diagnose

“obvious” lesions and not the “subtle” ones. To expect the average radiologist to diagnose all the subtle lesions would be to elevate the average physician to the perfect physician, a standard to which no profession can possibly adhere.^[2]

Alas, no perfect physician exists and so is true for a radiologist. This fact should be understood not just by the society but also by the radiologist community or we may be victimized someday by this menace of perfection. In this very issue lay the roots of the “safe reporting,” for which not just our physician colleagues but also our patients are complaining. For sure the obvious lesions should be reported, but we need to refine the search as well as our expectations for the subtle. To expect a radiologist to pick up every lesion in every case is literally equating the radiologist to a robot. Even the best of robots work only in preprogrammed situations, which are in stark contrast to the human body which is so opulent in its variations. Last but not the least, even robots are programmed by humans. Hence, the question that arises is are we, the radiologists, prepared to transform ourselves into artificial intelligence equipped “smart radiologists” – a phenomenon that started years ago with our mobile phones transforming into “smartphones” from “feature” phones and now expanding to many of our household devices. A lot of software such as CAD for lung nodules and mammographic density are available; many more are in the pipeline, some of which promise to even replace the radiologist in years to come. Even the developers of these software give the same disclaimers along with the lofty claims of their software as till date there isn’t even one perfect software for anything, let alone the radiological diagnoses. Each superintelligent gadgets are found lacking in some way or the other. The pertinent question that still holds ground is who takes responsibility for a “missed” diagnosis or “misinterpretation” by the artificial radiologic intelligence which is akin to the responsibility for an accident by a self-driven car.

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