



Standardization of diagnostic and therapeutic ultrasound and the pitfalls of standardization

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Our readers will be receiving this issue in April. The Journal of Medical Ultrasonics (JMU) is an English-language journal, and we should perhaps follow the customs of the English-speaking world, but in Japan, April signifies a new season in which people reach new milestones. I imagine that a good number of people in Japan are preparing for life in new surroundings beginning in April. I imagine that many young people will be starting new jobs for the first time, and that many other people will be moving to new jobs in new surroundings. Either way, I think they are the same thing in the sense that people will be moving to unfamiliar surroundings. However, I think it is times like this that present people the opportunity to discard practices that have served them well for many years and to try new things. Change is fraught with stress and anxiety, but I think mental stability and composure can also be achieved by changing and continuing to change. I pray that everything goes smoothly as people embark on their new journeys.

I would like to talk a little bit about standardization of diagnostic and therapeutic ultrasound. The reason I chose to discuss diagnostic and therapeutic ultrasound in particular is because therapeutic ultrasound has become more common in recent years in addition to diagnostic ultrasound. The standardization of diagnostic and therapeutic ultrasound is a topic that has been discussed at length to date. In the case of computed tomography (CT), for example, CT models with the same performance will yield the same images, and the biggest factor affecting the results will likely be the skill of the radiologists interpreting images. Therefore, it is possible to standardize diagnostic CT considerably by standardizing the skill of radiologists interpreting images. In the case of diagnostic ultrasound, on the other hand, differences in ultrasound imaging technique far outweigh any differences

resulting from the use of different ultrasound models. The diagnostic quality greatly depends on the examiner's ability.

To substantially standardize diagnostic and therapeutic ultrasound, multidisciplinary and widespread multicenter education at the local level may be key to achieving standardization of examinations and diagnosis with diverse examiners and broad examination opportunities/objectives. I do not think that this issue will be solved only by holding workshops in the major cities. When it comes to diagnostic and therapeutic ultrasound, I think that ongoing educational activities at the local level will be extremely important, and that the role played by The Japan Society of Ultrasonics in Medicine will be large in Japan. I think that standardization of diagnosis and treatment in general, not just in the area of ultrasound, will lead to patients and examinees receiving more homogeneous medical care. For the patient, I think that it is very important that the right to receive medical treatment in an equitable manner be guaranteed.

Standardization is indeed necessary, but at the same time, the standards on which the standardization is based cannot be incorrect or outdated. Nevertheless, conservative notions sometimes rear their ugly heads within us, that is, we may continue to use an outdated notion as the basis for standardization without realizing it. It is easier not to have to deal with change. The desire to seek refuge in a comfortable place is a potential pitfall. Needless to say, the standards on which standardization is based should be those that are most up to date and correct. To avoid this pitfall, it is important for us to always maintain the stance of questioning whether standards are correct.

Whatever the field, there are always those who have exceptional skill. We must distinguish in a fair manner whether the skill is an innate gift given only to them, whether it is fakery, or whether it is logically inevitable. And a skill that has been scientifically verified as being logically inevitable must be actively accepted as the next "standard." I think one means of validation could be to write a paper, submit it to a journal, and expose oneself to criticism from

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reviewers. While those involved in medical ultrasonics have a duty to broadly provide citizens with homogeneous medical care, I think they also need to have the intuitive ability to recognize the existence of skill that is in some way extraordinary. And it is my view that it is fundamentally important to always be on the lookout for new or novel things, and to maintain the ability to fairly assess them. By doing so, perhaps we can avoid falling into the aforementioned pitfall.

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