Editorial

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Ultrasonography 2009: where do we stand and what comes next?

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Obviously, ultrasonography (US) has become the imaging method with the most widespread use, our days. This is due to the fact that, unlike the other imaging techniques, US can be (and is) performed by, virtually, any medical specialist. The ability to see inside the patient is exploited not only by gastroenterologists and hepatologists, as shown in an excellent point of view, in this issue of the journal. Urologists and nephrologists, pediatricians and neonatologists and more and more often, rheumatologists and sports physicians make a very sound use of "clinical ultrasonography". Not to mention the ubiquity and widespread use of US in the emergency room and even on ambulances. Endocrinology and ophthalmology are also claiming a little slice of the cake. And I will ask all other medical specialties making a very good use of US to pardon my omission. What about general practitioners? They are entitled to expand their clinical judgment by broadening the spectrum of their senses with the use of this "optical stethoscope". Radiologists had to admit, not only in Europe, that their really are not "the only medical species to be able to evaluate images and imaging with competence" (and I am a radiologist, saying this!).

Too many specialities, too much knowledge. Alas, we have to admit that, even in a "narrow" field of medical imaging, such as US, the amount of existing and emerging knowledge can no longer be encompassed by a single mind. And the use of "clinical" US is, even more, leading to "region", "system", or, worse, "organ" US (sub)specialists. While this might be acceptable in some areas (such as ophthalmology), it is highly debatable in other applications (endocrine glands, musculoskeletal system or peripheral vessels). Whether we like it or not, overspecialization in US is unavoidable. Finally, it doesn't really matter who performs the examination, as long as the physician involved shows good skills, thorough knowledge and makes the best use of the method. Formal training and accreditation will always be a must. The predictable "atomization" of US can be counterbalanced by an open and active professional society, as SRUMB is, provided it offers both cover and freedom of movement for everybody.

What about the technical advances? Surprisingly enough, most of the new stuff is old stuff, refurbished. High-speed real time 3D ultrasound with matrix array transducers is a development of "slow" real time 3D available on the market for 8 to 10 years. The use of contrast media has been revived by the appearance of better products. However, much if not most of the knowledge in this field had already been acquired previously. Elastography, the newborn of US, is already four to five and still needs to prove a lot. Very high frequency transducers (ultrasound biomicroscopy) end by entering in competition with classic light microscopy Finally, the good news is the ever-increasing affordability of middle range, very good quality machines.

So, where do we stand? Still, our days, a middle range machine with good quality grayscale and Doppler data and appropriate transducers is all that is required for general purpose US. Formal training and accreditation of the performing physician are mandatory. "General" ultrasonography still exists.

What comes next? In a future not far from now, overspecialization seems unavoidable. A major technological breakthrough is yet to be expected. Until then, we might end by finding out new things with the aid of contrast or, maybe, elastography.

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