

Letters to the Editor

Why do not widen the use of Acoustic Radial Force Impulse method to staging assessment of the retroperitoneal fibrosis?

Dear Editors,

I read always with keen interest the scientific paper including, as co-author, M. Berretta, among whose the recent one "Acoustic Radial Force Impulse as an effective tool for a prompt and reliable diagnosis of hepatocellular carcinoma", by Rizzo L. et al¹.

In particular, they rightly highlight the more significant reliability of Acoustic Radial Force Impulse (ARFI) imaging sonographic method versus the transient elastography/B-mode sonography in identifying various progression stages of liver fibrosis, besides its specificity in discriminating different hepatic focal lesions²⁻⁵.

ARFI imaging uses short duration impulsive US radiation forces to induce excitation dynamic responses — «stiffness weighted» images — that are highly representative of the target tissue-related viscoelastic-mechanical properties and hence specific pathological features⁶.

Considering both the availability of such US diagnostic procedure — as easily feasible by a mere software tool running on hard-ware of the conventional sonography — and its reliability for early detection/characterization of various stages of fibrotic lesions, it follows that its use might be broadened to the diagnostic-prognostic studies of the Retroperitoneal Fibrosis (RPF), at least to validate, at first, its clinical usefulness in such diagnostic field.

As for RPF, the developments, since the Eighties-Nineties of the last century, of imaging technologies — including US, CT, MRI and nuclear medicine — have allowed to largely avoid the resort to invasive diagnostic procedures, such as biopsy, and to suitably monitor the dynamic course of the disease though, on B-mode sonography, early phases resulting unfortunately missed⁷⁻⁹. Hence the opportunity of applying the ARFI method to noninvasive staging assessment of RPF, even, in addition, resorting to MR-ARFI (Magnetic Resonance+Acoustic Radiation Force Imaging), by utilizing the association of ARFI imaging with quasistatic MR elastography (MRE) and line scan MRI pulse sequence originally used for diffusion imaging studies^{10,11}.

References

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