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EDITORS NOTE

Editor's choice to the Aug 2022 issue

Right atrial and right ventricular strain in patients with precapillary pulmonary hypertension, and advanced ultrasound techniques in arterial diseases.

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Impact Factor 2021

Dear reader,

Before I briefly describe my August selection of papers, that I would like to highlight, I would like to inform you that the **2021 Impact Factor for our journal is now 2.316**, which is slight below the IF 2020, which was 2.357. Despite the fact that often "more is better", I am very pleased with these results, that demonstrates consistency in the publication quality and appreciation of our journal. And of course, IF is only one parameter that is of importance; we have seen consistent improvements in turnaround times, submissions, downloads, publications, net citations, etc. With that I would like to thank our readership for their support to the Journal.

For this August issue, I would like to request your special attention to two papers that attracted my interest. The first one is entitled "Right atrial and ventricular strain detects subclinical changes in right ventricular function in precapillary pulmonary hypertension" by J.L.Vos et al. from the Radboud University Medical Center in Nijmegen, the Netherlands [1]. This is a well carried out study and nicely illustrated paper on the value of right atrial (RA) and right ventricular (RV) strain as an early marker in patients with precapillary pulmonary hypertension (pPH). In this cross-sectional study, 45 pPH patients and 20 healthy controls underwent cardiovascular magnetic resonance imaging, and feature-tracking derived RA and RV strain were evaluated. They found that based on the RA and RV strain analyses, alterations in RV function can be detected, even before right ventricular ejection fraction declines. And also that right atrial strain and right ventricular longitudinal strain were independent predictors of adverse prognosis. The illustrative example Fig. 1 below is Fig. 2 in their publication.

The second paper is the one by X Li et al. from the Hospital of the University of Pennsylvania, Philadelphia, USA, who provides a very nice overview of Advanced ultrasound techniques in arterial diseases [2]. They see an increasing interest in the use of advanced sonographic techniques such as contrast-enhanced US (CEUS) and 3-dimensional (3D) US to mitigate some of the current limitations of the current applications, such as operator dependency and limited field of view. Clinical applications of these advanced techniques include surveillance of abdominal aortic aneurysm, post-endovascular aortic repair, and carotid atherosclerotic plaques. The Fig. 2 above shows a nice 3D representation. They conclude that some of these 3D vascular applications are comparable in quality to those obtained by computed tomography.

Obviously, there are many more interesting publications in this August issue. I welcome you also to read the Commentaries and even to react to these Commentaries.

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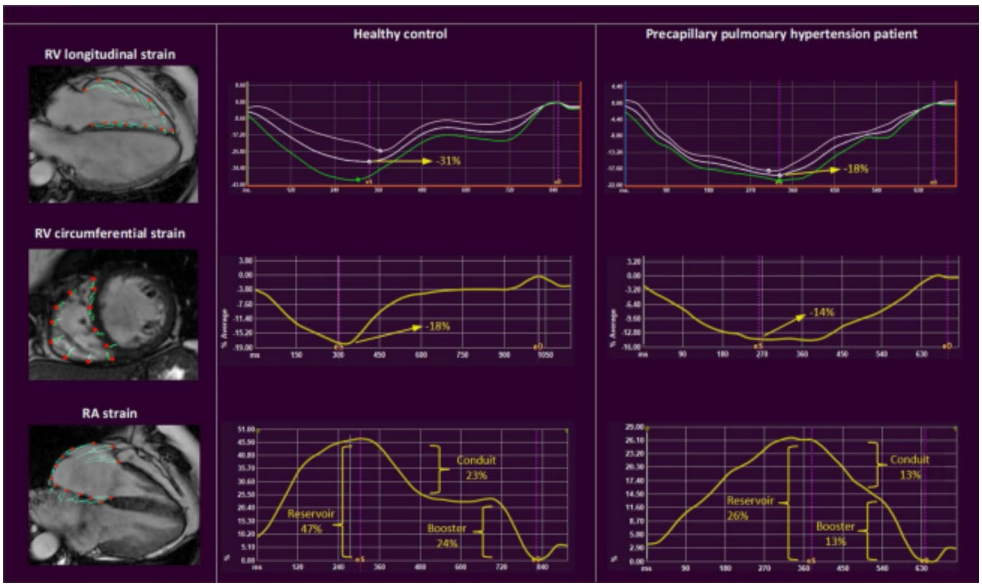

Fig. 1 Representative images of right ventricular longitudinal and circumferential strain, and right atrial strain in a healthy control and a precapillary pulmonary hypertension patient. Representative images of the different strain parameters (%, y-axis) in time (ms, x-axis). Compared to the healthy controls, RV longitudinal (upper pictures) and circumferential strain (middle pictures) are lower in pPH patients. In addition, RA reservoir and conduit strain are lower in pPH patients compared to healthy controls, whereas there were no signifcant differences in RA booster strain (lower pictures). Abbreviations: *pPH* pulmonary hypertension *RA* right atrial, *RV* right ventricular

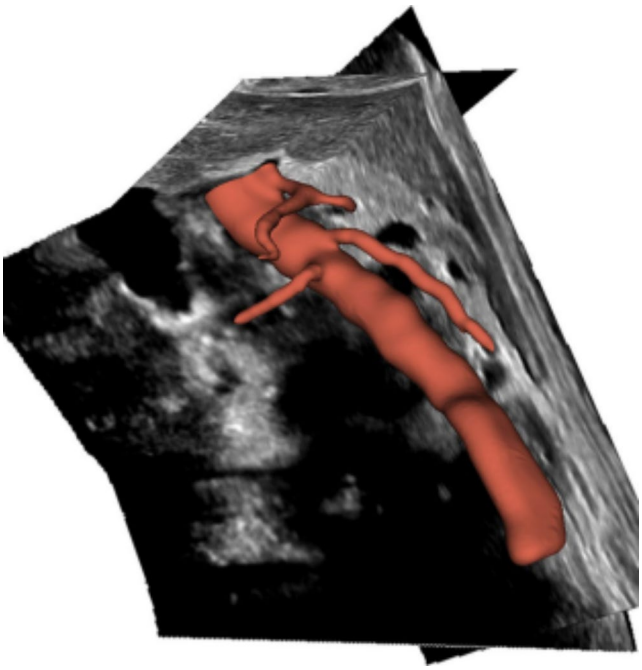

Fig. 2 3D tomographic ultrasound image of a normal abdominal aorta and the visceral arteries. This image was obtained using freehand 3D scanning with a C9-2 array transducer and a PIUR Imaging system (Munich, Germany)

References

1. Vos JL, Leiner T, van Dijk APJ et al (2022) Right atrial and ventricular strain detects subclinical changes in right ventricular function in precapillary pulmonary hypertension. Int J Cardiovasc Imaging. https://doi.org/10.1007/s10554-022-02555-6
2. Li X, Cokkinos D, Gadani S et al (2022) Advanced ultrasound techniques in arterial diseases. Int J Cardiovasc Imaging. https://doi.org/10.1007/s10554-022-02558-3