



Editor's choice to the May 2023 issue

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- 1) **Clinical profile and the extent of residual myocardial dysfunction among patients with previous coronavirus disease 2019;**
- 2) **Subclinical systolic dysfunction detected by 2D speckle tracking echocardiography in adults with diabetes mellitus: systematic review and meta-analysis of 6668 individuals with diabetes mellitus and 7218 controls.**

Dear Reader,

For this May 2023 issue, I have selected two echo-related papers: the first one on residual myocardial dysfunction post-COVID; and the second one is a meta-analysis on sub-clinical systolic dysfunction in adults with diabetes mellitus.

As we all know, there is a significant portion of patients who remain symptomatic for a long time post-COVID. Dr A De and Dr M Bansal from the Apollo Multispecialty Hospitals in Kolkata and the Medanta Heart Institute, in Haryana, both in India, studied 472 subjects with previous COVID and 100 controls; about half of the patients had the virus infection less than 12 weeks before the study investigation, the other half more than 12 weeks [1]. Also, all subjects underwent detailed clinical assessment and echocardiography, including measurement of left ventricular (LV) ejection fraction (EF) and global longitudinal strain (GLS).

Compared to the controls, the post-COVID subjects had significantly lower LVEF and LV GLS, whereas mitral E/e' was significantly higher. When grouped into LV GLS tertiles (Fig. 1), the subjects with the worst GLS were older, more likely to be men, and had higher BMI and a higher prevalence of hypertension and diabetes mellitus. The authors concluded, that the patients with more severe initial infection have more marked impairment of LV function and this impairment persisted even after several months of

recovery from the initial infection. Routine measurement of GLS may be helpful since LV systolic dysfunction in these patients is mostly subclinical. Despite all the limitations that the authors describe in their manuscript, among others that most of their patients had had a mild form of COVID illness, I believe that this manuscript deserves the extra attention.

Dr Ghoreyshi-Hefzabad and Dr Jeyaprakash from the University of Sidney in Australia and several co-authors have carried out this systematic review and meta-analysis from a total of 41 studies, including 6668 individuals with diabetes mellitus (DM) and 7218 controls [2]. They assessed the various global left ventricular strain values, as well as the left atrial reservoir strain and the right ventricular global strain (RVGLS). They found that patients with DM had overall 2 units lower LVGLS (LV Global Longitudinal Strain) than healthy subjects; other strain values were also lower in patients with DM. Meta-regression identified higher body mass index (BMI) as the single contributor to worse LVGLS, LV Global Circumferential Strain and LV longitudinal systolic strain rate.

The authors concluded that myocardial strains were reduced in the whole heart in patients with DM. The largest reduction was observed in LA reservoir strain, followed by RVGLS and LVGLS.

With these two choices, I would like to thank you, our readership, again for your interest and would like to wish you much reading pleasure with these two papers and all the other very interesting papers published in this May 2023 issue of the International Journal of Cardiovascular Imaging.

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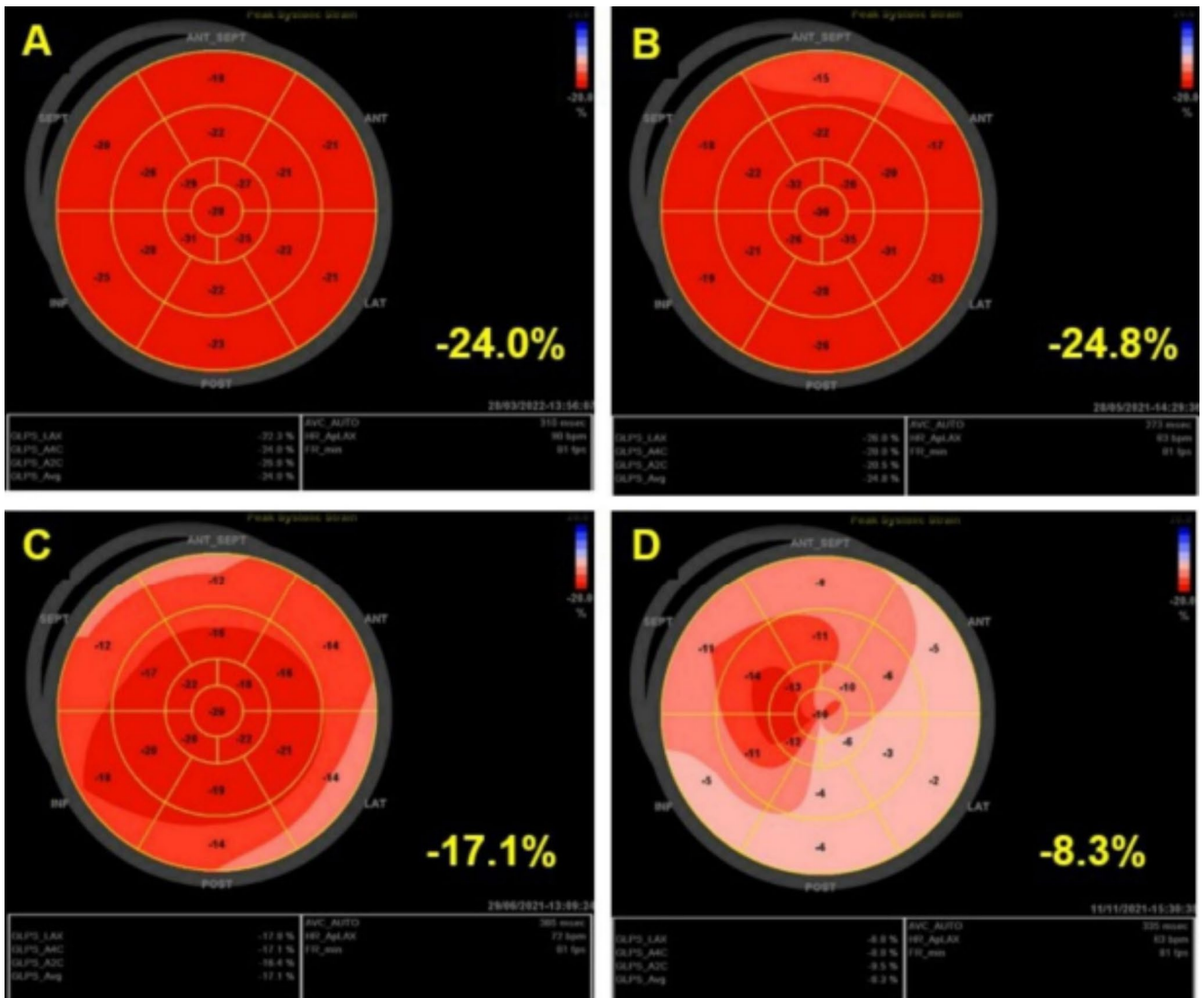


Fig. 1 Representative examples of global longitudinal strain (GLS) bull's eye plots in study patients and controls. (A) Controls; (B, C, D) Patients with previous coronavirus disease 2019 with GLS values in the highest, middle and lowest tertile, respectively

References

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