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in hypertensive patients than in controls with an increase of LA active emptying fraction ( $35 \pm 12\%$  versus  $30 \pm 12\%$  respectively;  $P=0.037$ ). The increase of LA pumping function was found to be higher in hypertensive patients with impaired diastolic function ( $P=0.029$ ).

**Conclusion** Hypertension was associated with an increase of pumping and reservoir functions and a decrease in left atrial passive emptying function.

**Disclosure of interest** The authors declare that they have no competing interest.

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### Left ventricular global longitudinal strain alteration in young patient and correlation with post-COVID syndrome (TUN END COV Study)

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**Background** Several protocols are in study to understand mechanisms of these persistent symptoms of COVID-19. The conventional echocardiography can be a good tool to detect abnormalities in the cardiovascular system induced by long COVID-19.

**Objective** Correlation between echocardiographic parameters and symptoms of long COVID and the spontaneous evolution at one month of follow-up.

**Patients and methods** A prospective multicentric study including a total of 630 patients diagnosed with COVID-19, 2 weeks to one month after recovering from COVID-19. Young patients without any medical history other than recent SARS-CoV2 infection are selected. A meticulous interrogation and clinical examination as well as an echocardiography are performed in all of patients. In addition to symptoms, we assessed echocardiographic parameters including initial left ventricular global longitudinal strain (initial SLG: SLGi) and after one month (SLG control: SLGc).

**Results** Mean SLGi was  $-18.1 \pm 2.4$  in study group ( $-19.6 \pm 1.5$ ;  $P < 0.001$ ). Forty-two patients (52.5%) had initially altered strain versus 38 patients (47.5%) with normal strain. The threshold value for SLG in our study has been established using ROC curve which was  $-17.95\%$  with sensibility (52.5%) and specificity (83.7%). We found a statistically significant correlation between the initial alteration of SLG and persistent symptoms in multivariate test: dyspnea ( $P < 0.002$ ); chest pain ( $P = 0.031$ ). At one month of follow-up, 87.5% of patients improved their SLG. And there was a correlation

between control GS value (mean SLGc was  $-18.91 \pm 3.33$ ;  $P = 0.002$ ) associated with a marked improvement in symptoms ( $P = 0.001$ ).

**Conclusion** We reported here an original case series of SLG alteration induced by SARS-CoV2 infection that is correlated with the presence of chest pain and dyspnea. However, this affection seems to be spontaneously significantly reversible and associated with significant clinical improvement.

**Disclosure of interest** The authors declare that they have no competing interest.

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### Prognostic value of tricuspid annular plane systolic excursion in chronic heart failure

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**Background** The estimated risk in heart failure patients (HF) is crucial for the therapeutic strategy. Right ventricular function (RV) predicted exercise capacity in these patients. The systolic excursion of the tricuspid annulus (TAPSE) has been described as a single endpoint that RV function.

**Purpose** The aim of our study is to demonstrate the relationship between TAPSE and left ventricular ejection fraction (LVEF) on one hand and in the other hand TAPSE and exercise capacity in people with HF.

**Methods** Our study included 30 HF patients, defined as an LVEF estimated by Simpson biplane  $\leq 45\%$ . Echocardiography and a 6 min walk test (6MWT) were performed on the same day for all patients. Pearson analysis used to assess the relationship between variables. A  $P$ -value  $< 0.05$  was considered statistically significant.

**Results** The mean age of our patients was  $58.3 \pm 13$  years. Sixteen patients (53%) had ischemic Hf. Twenty-two patients (73%) were in NYHA class II and 7 were in class III. The mean LVEF was  $37 \pm 5\%$ . The average distance walked in 6MWT was  $393 \pm 135$  m. The average value of TAPSE was  $18 \pm 3$  mm. Six patients (20%) had TAPSE  $< 16$  mm. TAPSE was correlated significantly with LVEF ( $r = 0.36$ ;  $P = 0.049$ ) and with distance walked in the 6MWT ( $r = 0.43$ ;  $P = 0.02$ ).

**Conclusion** Right ventricular systolic function, as assessed by TAPSE, has important prognostic value in chronic heart failure patients. It is both correlated to systolic LV function and physical performance of these patients.

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### Normal values of aortic root diameters in sub-Saharan Africans: The TAHES study

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**Introduction** Reported ranges of normal values are mostly issued from Caucasian cohorts. Data on black African subjects are sparse and not issued from community-dwelling cohorts.

**Purpose** Our study aimed to establish reference values for ARD in a Beninese general population cohort.