## Supplementary material

Majos-Karwacka E, Kowalik I, Kraska A, et al. Atrial fibrillation and elevated heart rate independent prognostic factors of right ventricular dysfunction in patients with heart failure with reduced ejection fraction. Kardiol Pol. 2022.

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Figure S1. Multivariate analysis for independent predictors of right ventricular function (RVEF) <45\%

Table S1. Selected echocardiographic findings in patients with atrial fibrillation (AF) and sinus rhythm (SR)

|  | AF | SR | $\boldsymbol{P}$-value |
| :--- | :---: | :---: | :---: |
|  | $\mathrm{N}=94$ | $\mathrm{~N}=32$ |  |
| MR, significant, n (\%) | $32(34.0)$ | $2(6.2)$ | 0.002 |
| TR, significant, n (\%) | $32(34.0)$ | $1(3.1)$ | 0.001 |
| RVSP, mm Hg, mean <br> (SD) | $40.8(10.2)$ | $34.0(8.1)$ | 0.001 |
| TAPSE, cm, mean (SD) | $1.92(0.48)$ | $2.06(0.58)$ | 0.19 |
| S', mean (SD) | $9.7(2.31)$ | $12.1(3.83)$ | 0.01 |
| RV-FAC, \% | $36.9(12.4)$ | $39.7(12.8)$ | 0.28 |
|  | $\mathrm{~N}=86$ | $\mathrm{~N}=30$ |  |
| RVEF, \%, mean (SD) | $37.2(7.3)$ | $48.2(7.5)$ | $<0.001$ |
| RVLS, \%, mean (SD) | $-18.3(4.6)$ | $-23.9(4.23)$ | $<0.001$ |

MR, mitral regurgitation; TR, tricuspid regurgitation; RVSP, right ventricular systolic pressure; TAPSE, tricuspid annular plane systolic excursion; s’, tricuspid lateral annular systolic velocity; RVEF, right ventricular ejection fraction; RVLS, right ventricular longitudinal strain of the free wall

Table S2. Relationship between echocardiographic parameters observed in two- and three dimensional echocardiography (2DE and 3DE) depending on the occurrence of atrial fibrillation. (Pearson correlation coefficients)

|  | $\begin{gathered} \text { AF } \\ \mathrm{N}=86 \end{gathered}$ | $\begin{gathered} \hline \text { SR } \\ \mathrm{N}=30 \end{gathered}$ | $\begin{gathered} \text { AF } \\ \mathrm{N}=86 \end{gathered}$ | $\begin{gathered} \hline \text { SR } \\ \mathrm{N}=30 \end{gathered}$ | $\begin{gathered} \text { AF } \\ \mathrm{N}=\mathbf{8 6} \end{gathered}$ | $\begin{gathered} \text { SR } \\ \mathrm{N}=30 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | s' (2DE) |  | TAPSE (2DE) |  | RV FAC (2DE) |  |
| RVEF (3DE) | $\begin{aligned} & \hline \mathrm{r}=0.12 \\ & P=0.36 \end{aligned}$ | $\begin{gathered} \mathrm{r}=0.16 \\ P=0.51 \end{gathered}$ | $\begin{aligned} r & =0.33 \\ P & =0.002 \end{aligned}$ | $\begin{aligned} & \mathrm{r}=0.30 \\ & P=0.11 \end{aligned}$ | $\begin{aligned} & \mathrm{r}=0.19 \\ & P=0.08 \end{aligned}$ | $\begin{gathered} \mathrm{r}=0.18 \\ P=0.35 \end{gathered}$ |
| FW RVLS <br> (3DE) | $\begin{aligned} & \mathrm{r}=-0.05 \\ & P=0.70 \end{aligned}$ | $\begin{aligned} & \mathrm{r}=-0.16 \\ & P=0.49 \end{aligned}$ | $\begin{aligned} & \mathrm{r}=-0.34 \\ & P=0.001 \end{aligned}$ | $\begin{gathered} \mathrm{r}=-0.27 \\ P=0.15 \end{gathered}$ | $\begin{aligned} & \mathrm{r}=-0.11 \\ & P=0.33 \end{aligned}$ | $\begin{aligned} & \mathrm{r}=-0.12 \\ & P=0.52 \end{aligned}$ |

s', tricuspid lateral annular systolic velocity; TAPSE, tricuspid annular plane systolic excursion; RVEF, right ventricular ejection fraction; RVEF, right ventricular ejection fraction; FW RVLS, right ventricular longitudinal strain (free wall)

