Echocardiographic Assessment of Left Ventricular Midwall Mechanics in Spontaneously Hypertensive Rats

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This study was done to analyze the systolic function and MW mechanics of LV in SHR using echocardiogram in 36 anesthetized animals (18 SHR, 18 Wistar normotensive rats-W-). Endocardial shortening (ES) was higher in SHR (SHR: 64 ± 6% - W: 58 ± 4% -p<0.01), whereas no significant difference was found in MW shortening (SHR: 27 ± 4% - W: 28 ± 4% - n.s). 12/18 (66%) SHR showed ES higher that normally predicted, compared with 3/18 (16%) with observed enhanced MW shortening (p<0.01). These results suggest that the analysis of MW mechanics by echo allow us to better understand the LV performance in SHR and that the exaggerated endocardial motion could not represent a really supranormal systolic performance.