Objective: The aim of this study was to present right ventricle echocardiographic parameters in asymptomatic adolescents with obesity and/or hypertension.

Materials and Methods: 93 obese (n=36 obese-nonhypertensive and n=57 obese-hypertensive; body mass index >30 kg/m²) and 14 non-obese hypertensive (body mass index=17–25 kg/m²) adolescent along with 23 age-matched non-obese, non-hypertensive (body mass index=17–25 kg/m²) adolescent for the control group, were included in the study. Pulsed Doppler and tissue Doppler parameters were studied using transthoracic echocardiography for right ventricular function.

Results: There was significant difference in tricuspid valve (TV) myocardial performance index (MPI), TV isovolumic relaxation time (IVRT), and TV isovolumic contraction time (IVCT) when the hypertensive and normotensive cases in the non-obese group were compared. While there was significant difference in all tissue Doppler parameters between the obese and non-obese cases in the hypertensive group, there was also significant difference in TV E/A ratios and TV MPI parameters between the hypertensive and non-hypertensive cases in the non-obese group.

Conclusion: According to our findings, conventional and tissue Doppler echocardiography is useful when demonstrating the effects of obesity on the right ventricle, both in the presence and absence of accompanying hypertension, and echocardiographic indicators of right ventricle dysfunction vary depending on whether obesity is unaccompanied or not.