



[Pediatr Pulmonol.](#) 2003 Jul;36(1):27-33. [Links](#)

Echocardiographic parameters in adolescents with sleep-related breathing disorders.

[Sánchez-Armengol A](#), [Rodríguez-Puras MJ](#), [Fuentes-Pradera MA](#), [Quintana-Gallego E](#), [Borja-Urbano G](#), [Cayuela A](#), [Capote F](#).

Department of Pneumology, Hospital Universitario Virgen del Rocío, Seville, Spain.
almar@comcadiz.com

Few data are known about the effects of sleep-related breathing disorders (SRBD) on the cardiovascular system in adolescents. Forty healthy adolescents (mean age, 13.7 +/- 1.6 years) answered a questionnaire regarding symptoms of sleep-related breathing disorders (SRBD) and underwent a cardiorespiratory polygraphy and echocardiography. Echocardiographic data in snorers with polygraphic abnormalities suggestive of SRBD (positive group, n = 29) were compared with the results in nonsnorers without polygraphic abnormalities (n = 11) who were included in the control group. Ventricular dimensions and indices of left ventricular systolic function were within normal limits and were not significantly different between the two groups. Indices of left ventricular diastolic function were also within normal limits, but isovolumetric relaxation time (IVRT) was significantly longer among the positive group (72.5 +/- 8.4 msec) than among the controls (65.1 +/- 7.9 msec) (P = 0.018). Multiple regression analysis showed that posterior wall thickness was predicted by a model that included cardiac events related with respiratory events and/or desaturations, and respiratory disturbance index (RDI) in supine position. Deceleration of early diastolic flow was predicted by RDI, percentage of total recording time with SaO₂ < 90% (CT(90)), and age; the variability of isovolumetric relaxation time was predicted by a model that included RDI in supine position. We found a significant relationship between polygraphic parameters suggestive of SRBD and echocardiographic measurements of ventricular dimensions and diastolic function. Also, echocardiographic parameters suggestive of some degree of left ventricular diastolic dysfunction were found in snoring adolescents with polygraphic abnormalities. Copyright 2003 Wiley-Liss, Inc.

PMID: 12772220 [PubMed - indexed for MEDLINE]