

Prevalence and Risk Factors of Obstructive Sleep Apnea in Adults with Congenital Heart Disease

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Introduction: Obstructive Sleep Apnea (OSA) is a common condition that can lead to multiple cardiovascular complications. The relationship between adults with Congenital Heart Disease (ACHD) and OSA is not well characterized. We sought to determine the prevalence, risk factors, and impact of OSA in ACHD.

Methods: One hundred and forty-nine consecutive patients seen in the ACHD Program were screened for obstructive sleep apnea using the Berlin Questionnaire (BQ). Medical Records were reviewed and relative variables were analyzed to determine risk factors and associated outcomes.

Results: Mean age was 32 yrs (range 18-74). There were 77 (52%) females. Most common diagnoses were conotruncal defects (29%), left sided obstructive lesions (26%), transposition of great arteries 15%), and single ventricle S/P Fontan (9%). Overall, 47 (31%) had a positive screen for OSA. Of these, 20 had a positive sleep study. The remaining 27 have been referred but have yet to complete sleep studies. Compared to patients with a negative screen, patients with a positive screen were likely to be heavier (mean 98 vs 71 kgs, $p < 0.001$) and have higher BMI (31 vs 25, $p < 0.001$). Age, gender, diagnosis, and substance abuse were not found to be risk factors. Patients with a positive OSA screen were more likely to have diabetes ($p < 0.04$), hypertension ($p < 0.05$), depression ($p < 0.002$), decreased exercise capacity ($p < 0.01$), and were more likely to have a defibrillator ($p < 0.007$).

Conclusion: OSA is common in ACHD patients and is associated with increasing weight and BMI. ACHD patients with a positive OSA screen are at increased risk for comorbidities including diabetes, hypertension, and depression. As a result, screening programs for OSA in this population should be considered, to identify earlier, treat, and prevent late complications.