

Sleep disordered breathing in Children with Congenital Heart Disease

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Introduction: Adult patients with heart failure are well recognised to have sleep disordered breathing (SDB). There is high prevalence of both obstructive and central apnoea documented. However, there is little data on SDB in children with congenital heart disease (CHD). Recognition of SDB is important in optimizing treatment and avoiding morbidity.

Method: We aimed to investigate the prevalence and type of SDB in children with CHD referred to the sleep unit of a tertiary cardiorespiratory hospital. A retrospective case note review of all children with CHD who underwent a sleep study between Jan 2013 to December 2014 was performed. 59 patients (31 male) were included, aged 3.6[1.35-9.93]yrs median[IQR].

Results: SDB was seen in 36/59 patients with CHD. All 8 patients in heart failure had evidence of central sleep apnoea: The CAI was higher in the patients with heart failure 11.45[4.6-17.95] median [IQR] compared to patients with CHD without heart failure 1.15[0.37-2.55] median [IQR] ($p=0.0001$). 1 patient demonstrated the crescendo-decrescendo "Cheyne-Stokes" breathing pattern (Fig. 1) commonly seen in adults with heart failure.

Conclusion: There is a high prevalence of SDB in children with CHD, particularly in those with heart failure. Unlike previous publications (Peer et al, Front Psych 2010) "Cheyne-Stoke" breathing can be seen in children with CHD who are in heart failure, though may not be as common as in adults.