JCK Poster

JCK Poster 1 (II-JCKP1)
Basics/New Insights/Others

Chair:Tran Cong Bao Phung(Cardiology Department, Children Hospital 1, Ho Chi Minh City, VietNam)
Sat. Jul 8, 2017 6:15 PM - 7:15 PM Poster Presentation Area (Exhibition and Event Hall)

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[II-JCKP1-09]Effects of respiratory ciliary dysfunction on increased postoperative respiratory complications in congenital heart disease patients with heterotaxy

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Ciliary motion play a critical role on both airway mucus clearance system and left-right body axis development.We investigated whether CHD-heterotaxy patients may have ciliary dysfunction(CD) and its effect on worse postsurgical outcomes.
We assessed 87 CHD patients with heterotaxy for airway CD, and 100 healthy persons were also recruited as controls. Videomicrocopy was used to examine ciliary motion in nasal tissue, and nasal nitric oxide (nNO) was measured; nNO level is typically low with Primary Ciliary Dysfunction(PCD).
40 patients (46%) exhibited CD characterized by abnormal ciliary motion among total 87 heterotaxy patients, compared with 1subject with CD among 100 health controls(1%). Among 40 heterotaxy patients with CD, 27 patients appeared below or near the PCD cutoff values, compared with all normal nNO levels in health controls. We examined postsurgical outcome in 40 heterotaxy-CHD patients with CD, compared with 32 heterotaxy-CHD patients without CD. We found mean length of postoperative hospital stay (14.1 vs 11.2 days; OR, 2.4) and mechanical ventilation(65 vs 53 hours; OR, 2.1) were significantly increased in the heterotaxy patients with CD. Also elevated were number of reintubation(1.8 vs 1.3; OR, 3.1), salvage (11.5% vs 5.1%: OR, 2.1).
Our studies show that CHD patients with heterotaxy have substantial risk for CD and increased respiratory disease. Heterotaxy-CHD patients with CD may have increased risks for respiratory deficiencies. Overall, there was a trend toward increased mortality in CD patients with intermediate follow-up evaluation.