Hong Ju Shin et al., J Clin Exp Cardiolog 2018, Volume 9
DOI: 10.4172/2155-9880-C3-095

The importance of preoperative oxygen saturation as a predictor of pulmonary arterial hypertension after surgery of atrial septal defects

Hong Ju Shin
Korea University Ansan Hospital, South Korea

Introduction & Aim: There is no concrete predictor of the change of pulmonary arterial pressure after surgical closure of an atrial septal defect (ASD) in patients with pulmonary arterial hypertension (PAH). The aim of this study was to investigate the role of preoperative room air arterial oxygen saturation (SaO_2) (arterial blood gas data) as a predictor of postoperative PAH.

Methods: The medical records of 36 patients [>20 years, mean pulmonary arterial pressure (mPAP) ≥25 mmHg] who underwent surgical closure of an ASD between March 2004 and January 2014 were retrospectively reviewed.

Results: The median age was 47 years (range, 24.6-65.9 years) and mPAP was 38±14 mmHg. The mean pulmonary vascular resistance (Rp) was 3.9±4.2 Wood units, and fenestration was performed in 12 (33%) patients. Only 1 patient received anti-PAH medication preoperatively. The median follow-up period was 4 years (range, 0-10 years). There were two hospital deaths, one of which was related to PAH. At the last follow-up, PAH (estimated tricuspid regurgitation velocity >3 m/s) existed in 7 patients (19%) and 10 patients (28%) were receiving anti-PAH medications (considered as clinical PAH). Univariate analysis for persistent clinical PAH revealed that mPAP, Qp/Qs, Rp, room air arterial oxygen saturation and postoperative functional class were significant risk factors. Only SaO_2 remained a significant risk factor in multivariate analysis (P=0.03).

Conclusion: Preoperative room air SaO_2 is a useful predictor of persistent PAH in adult patients undergoing surgical closure of an ASD.

Biography

Hong Ju Shin is currently the Clinical Associate Professor at Department of Thoracic and Cardiovascular Surgery, Korea University Ansan Hospital. He also has the Membership at various societies such as The Asian Society for Cardiovascular Surgery, The Korean Society for Thoracic and Cardiovascular Surgery, The Korean Society of Circulation, The Korean Pediatric Heart Society and The Korean Medical Association.

babymedi@naver.com

Notes: