

5th International Conference on **Clinical & Experimental Cardiology**

April 27-29, 2015 Philadelphia, USA

Miniaturized hemodynamic trans-esophageal echocardiogram (hTEE) for cardiac monitoring

Hitoshi Hirose, Harrison Pitcher and Nicholas Cavarocchi
Thomas Jefferson University Hospital, USA

In cardiac surgery patient, traditionally, postoperative hemodynamics has been assessed by arterial lines and pulmonary artery catheters. While these instruments are helpful; in hemodynamically unstable patient, echocardiography is the gold standard to assess heart function and dynamics. Obtaining transesophageal echocardiography (TEE) on an emergent basis may be limited by its availability. A miniaturized hemodynamic TEE probe (ImaCor Inc., Garden City, NY) was developed to provide information of cardiac function and filling status. The probe is 5 mm in diameter and leave indwelling maximum 72 hours. The trained personnel can insert this probe and obtain the real time images, which can be used for diagnosis and treatment.

The hTEE was used for cardiac monitoring 61 cases between 2011 and 2012. The indications for probe insertion were hemodynamic instability (n=32), ECMO weaning (n=10), VAD alarm (n=1), tamponade (n=14), pulmonary embolism (n=2), and intra-aortic balloon pump wean (n=2). In all 61 cases, we were successfully able to diagnose and treat the etiology of instability based on the hTEE findings without any probe complications.

Utilization of the hTEE probe successfully diagnosed and aided therapy in all patients with hemodynamic instability refractory to initial therapy. The hTEE probe can be a valuable diagnostic tool to aid clinicians in the management of hemodynamics in the postoperative period of critically ill patients.

Biography

Hitoshi Hirose has graduated from Nagasaki University School of Medicine, Nagasaki Japan in 1990, had General Surgery Residency in St. Luke's Roosevelt Hospital, New York, NY and Nagasaki University Hospital. He started Cardiovascular Surgery training in Japan and then had Clinical Fellowship in Cleveland Clinic Foundation in 2002-2004. He received PhD from Juntendo University College of Medicine in 2005 for his clinical research regarding cardiac surgery. Then he moved into Philadelphia and has been working as attending Physician in the Division of Cardiothoracic Surgery, Thomas Jefferson University since 2009. His major interest includes management of cardiogenic shock and mechanical circulatory device, especially ECMO.

genex@nifty.com

Notes: