The pleuraflow active chest tube clearance system: Initial clinical experience in adult cardiac surgery

To address the clinical consequences related to chest tube clogging, a novel chest drainage apparatus, the PleuraFlow Active Tube Clearance System (Clear Catheter Systems, Bend, OR), was developed. A user preference study was conducted to assess how specified users (surgeons, nurses, and intensive care physicians) used this system to achieve specified goals in an efficient manner. Data were collected from patient charts and by a questionnaire that they had filled. All the surgeons (n=7) noted that the device was not any more difficult to insert than a conventional chest tube and was easy to assemble and use. There were no reports of malfunction or complications related to the installation or use of the system. A majority, 77% (24/31), of nurses felt that the device was more time efficient than stripping, milking, or tapping the chest tubes to keep them open. A majority (16/19, 84%) of the PleuraFlow chest tubes and guide tubes were removed together in one piece within 1 day of surgery. Overall, the physicians and nurses rated this positively for its ability to be incorporated into the postoperative workflow of managing the drainage of patients after heart surgery. This device may be useful to allow caregivers to be certain that chest tubes are functioning in the early hours after surgery, when active bleeding is resolving and when complications from undrained blood can ensue.

Biography

Louis P Perrault received his Medical degree from Université de Montréal in 1986. He completed his 3 years of training in basic science research in Paris under the supervision of Professor Paul VanHoutte at Université Louis-Pasteur and obtained a Doctor degree (PhD) in fundamental research in 1997. He is the current President for the CSCS. He is a local Principal Investigator for the Cardiothoracic Surgical Trials Network (CTSNet) for the NIH/CIHR since 2007. He is also an investigator of the FRSQ (Fonds de la Recherche en Santé du Québec). He has authored and co-authored more than 250 articles in peer-reviewed publications including New England Journal of Medicine, J Chir Thorac Cardio-Vasc, Circulation and J Heart Lung Transplant. His areas of clinical expertise include: Coronary Artery Bypass Grafting Surgery (CABG), valve surgery and heart transplantation, endothelial dysfunction in left ventricular hypertrophy, pulmonary hypertension following CPB, stem cells therapy and heart transplantation.

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