

Thoracic & Cardiovascular Surgery - Scientific Abstracts

The Use of Jackson Pratt Drain Following Open Heart Surgery

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Background --- Following cardiac surgery, the incidence of pericardial effusion is high. Since the consequence of mediastinal tamponade is catastrophic, it is essential to drain and decompress the pericardial and/or pleural spaces following open heart surgery. This is accomplished in many institutions with multiple large-bore (28F to 36F), semi-rigid tubes. Although these drains can be successfully used to drain the fluid accumulating in the anterior vicinity of the heart during routine cardiac procedures, drainage of the fluid from the posterior region may be difficult. We have employed a small, flexible Jackson Pratt drain for use in patients following open heart surgery in order to drain the residual fluids in the retrocardiac space after an early removal of the semi-rigid tubes, encourage earlier ambulation and prevent postoperative pericardial effusion subsequent cardiac tamponade. This study aims to determine the usefulness of Jackson Pratt drain as adjunct to the conventional semi-rigid mediastinal tube in an adult population after cardiac surgery.

Methods --- This is a prospective cohort study of adult patients who underwent cardiac surgery with cardiopulmonary bypass at the Philippine Heart Center from January 1 to March 31, 2007. A total of 165 patients underwent open-heart surgery in our institution. Postoperative pericardial decompression was undertaken using a semi-rigid tube plus a Jackson Pratt draining tube in the intervention group (Group A) and a semi-rigid tube alone in the control group (Group B). Data were analyzed as to the age of the patient, weight, operative procedure done, total cross-clamp and total bypass time, total amount of drainage, average time of tube removal, length of postoperative stay, appearance of postoperative chest radiographs and echocardiograms, and need for further drainage from pericardial and need for further drainage from pericardial spaces.

Results --- One hundred sixty-five patients were included in the study. Male to female ratio is 105:60. Sixty-seven (40.61%) patients under Group A (Intervention Group) received the semi-rigid tubes plus a Jackson Pratt drain placed in the retrocardiac space and 98 (59.39%) patients under Group B (Control Group) only had the semi-rigid tube. There were more males operated for cardiac surgery, 38 (23%) were in group A and 67 (40.61%) in group B while there were only 29 (17.6%) females in group A and 31 (18.79%) in group B. Chi-square test showed no significant difference in gender in between the two groups. The difference in between the two groups in age, weight, length of hospital and postoperative stay, number of days with semi-rigid tubes, total chest tube output, bypass time and cross-clamp time were not significant. Pericardial effusion occurred in 15 (9%) patients and was more common on the patients who underwent valve replacement. Majority of these were classified under minimal pericardial effusion. Although more common on group B, the difference was not significant.

Conclusion --- No significant differences were noted in the occurrence of pericardial effusion noted in the occurrence of pericardial effusion in patients drained with conventional semi-rigid tubes as compared to the semi-rigid tubes plus the Jackson-Pratt drains after cardiac operations. Though not statistically significant, there may actually be an advantage of

Jackson-Pratt drains over conventional chest tubes in this regard. There was also no significant difference in the type of surgical procedure, total bypass and cross clamp time, amount of drainage, number of days with semi-rigid tubes, length of postoperative stay, and length of hospital stay and incidence of postoperative pleural effusions. ***Phil Heart Center J 2012;16:87.***