

**Effect of Pulmonary Artery Venting in Patients Having Elevated Pulmonary Artery Pressure Undergoing Mitral Valve Surgery, Comparative Study**

**ABSTRACT**

**Background:** Despite being controversial, left ventricular venting is still used to facilitate valvular heart surgeries and prevent distention. The classic way to vent the left ventricle is via the right superior pulmonary vein, which has many reported complications.

**Objective:** We aimed to evaluate the effectiveness of pulmonary artery venting in patients undergoing mitral valve surgery who have elevated pulmonary artery pressure.

**Patients and Methods:** 100 patients undergoing isolated mitral valve replacement, and having elevated pulmonary artery pressure were recruited in Cairo University Hospitals. They were divided into 2 groups; group 1 had pulmonary artery venting, and group 2 had no pulmonary artery venting. Both groups were compared for preoperative, operative and postoperative variables.

**Results:** Patients were divided into 2 groups; group 1 comprised 51 patients and had pulmonary artery venting, and group 2 comprised 49 patients and had no pulmonary artery venting. Both groups had similar preoperative characteristics, with group 1 having 14 minutes shorter cross clamping time (p value = 0.001), and 0.6 days shorter ICU stay (p value = 0.002), mean hospital stay was  $6.4 \pm 1.7$  in group 1 and  $8.7 \pm 2.2$  in group 2 (p value = 0.001).

**Conclusion:** Using pulmonary artery venting during open heart surgery for mitral valve replacement, in patients with elevated pulmonary artery pressure is beneficial, facilitates the surgical procedure, and is associated with shorter ICU and hospital stay.

**Keywords:** Mitral valve replacement, Left ventricular venting, ICU stay, Surgical outcome, Elevated pulmonary artery pressure.