

## VALVULAR HEART DISEASE AND GENERAL ANESTHESIA

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**Background:** According to the high incidence of valvular heart disease in our country which is mostly of the sequel of acute rheumatic fever, the most cardiac patients undergoing different operations are in this group.

**Methods:** In this survey 23 valvular heart patients (13 mitral stenosis and regurgitation, 5 mitral stenosis + aortic regurgitation, 3 mitral stenosis + aortic stenosis and regurgitation, 2 pure mitral stenosis) underwent general anesthesia for abdominal surgery and cesarean section.

The age of the patients was 18-39 years old. 13 of them were female and the other were male. Sixteen ones were in functional class I, six in FC II and just one was in FC III.

The physical examination and echodoppler study were mostly performed in Baghiatolah Hospital.

**Findings:** The patients of FC I tolerated the operation and general anesthesia without any problems. Two of the 6 FC II patients developed tachycardia after cesarean section that one was sinus tachycardia and the other atrial fibrillation with rapid ventricular response. One case of FC III go to FC II after correction of anemia and did not complicate during general anesthesia. This patient had double valve disease (MS, MR, AI) difference (ISD) where  $P < 0.05$  was considered significant.

**Finding:** In 25 of 30 subjects (83.3 percent), head rotation increased the overlap between the two vessels ( $P < 0.05$ ). In 26 of 30 subjects (86.7 percent), valsalva maneuver increased the overlap between the two vessels ( $P < 0.05$ ). In 26 of 30 subjects (83.3 percent), valsalva maneuver increased the IJV diameter ( $P < 0.05$ ). In 25 of 30 subjects (83.3 percent), valsalva maneuver increased cross-sectional area of IJV ( $P < 0.05$ ).

**Conclusion:** Our results demonstrated: 1) valsalva maneuver not only dilated the IJV, but also increased the overlap between the IJV and Ca, in contrast to one study that reported valsalva maneuver, decreased the overlap between the two vessels LS.2) head rotation increased, the percent age of overlap between the two vessels. Therefore, head rotation increased the risk of carotid artery puncture. We propose neutral head posi-



tion with valsalva maneuver as a safe and reliable for IJV cannulation.

**Key words:** Valsalva Maneurer, Internal Jugular Vein, Sonography.