

**The Incidence and Hemodynamic Significance of Gas Emboli During Operative Hysteroscopy: a Prospective Echocardiographic Study**

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**Aims:** Operative hysteroscopy is associated with complications including the development of gas embolism. The aim of this study was to utilize continuous echocardiographic imaging during operative hysteroscopy to assess the extent and the hemodynamic effects of gas embolism in these patients.

**Methods and results:** Women undergoing operative hysteroscopy under general anesthesia without a history of organic cardiac disease were eligible. Transthoracic echocardiography was performed continuously in all study participants with assessment of the extent and frequency of gas embolism, right ventricular function and pulmonary hypertension. 23 women (mean age  $48.0 \pm 9.4$  years) participated in the study. All subjects had evidence of bubble embolism in the RA and 20 of 23 (85%) had evidence of continuous flow of bubbles. Estimated pulmonary artery systolic pressure was  $19.1 \pm 3.7$  mmHg prior to the procedure and  $23.3 \pm 3.4$  following the procedure, a statistically significant difference ( $p < 0.05$ ). There were no significant changes between the two groups in right ventricular end-diastolic area, end-systolic area or fractional area change.

**Conclusions:** Our study demonstrates a high frequency of continuous gas embolism during hysteroscopy which is associated with a small but statistically significant increase in pulmonary artery systolic pressure without affecting right ventricular function.