
Editorial: Intraoperative Transesophageal Echocardiography

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Abstract

Few areas in Cardiac anesthesia have matured as much in the past 8 years as the use of Intraoperative TEE. This is due to a combination of factors such as, advancements in equipment technology, and extensive scientific investigation. The manufactures of this equipment have worked hand in hand with the clinical investigators to produce many of the advancements we now utilize in our clinical practice. Advancements such as multiplane probes, higher frequency probes, advanced color Doppler, and more recently, Doppler tissue imaging and second harmonics now provide the clinician with better imaging of the cardiac structures thereby guiding many of our clinical decisions. This can be seen daily in surgeon's decisions as well as those made by the anesthesiologists.

We have seen the utilization of this technology increase significantly over the past 5 years from one to two cases per week to five to six studies daily. We studied 582 consecutive aortic or valvular over 14 months at our institution to determine the impact of TEE. The greatest impact was seen in redo valvular cases with a significant pre-op impact of 39.2 %. This was seen specifically in localizing the position

of the perivalvular leak, and localizing abscesses and fistula. The next largest impact was noted in mitral valve repair where a significant pre-operative impact was noted in 38% of patients. Specifically in cases where mitral valve repair was changed to replacement, the repair was canceled or ASD/PFO was found and repaired. In an additional 8% postoperative studies deemed it necessary to return to pump secondary to inadequate repair and one subsequent dissection.

This is only a small part of the study we completed at Baylor however one can well imagine how this can significantly reduce mortality and morbidity as well as reduce overall costs to both patients and institutions.

In the next issues of The Internet Journal of Anesthesiology we will discuss areas such as cost benefit analysis, training issues, quantitative techniques and new technology issues. We will also provide illustrative case studies to increase your knowledge of the clinical applications of Intraoperative TEE.

References

Author Information

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