THE IMPACT OF INTRAOPERATIVE ECHOCARDIOGRAPHY ON THE PRACTICE OF CARDIAC SURGERY

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Over the past 30 years, perioperative echocardiography has become an invaluable diagnostic tool and monitor of cardiac performance for the management of cardiac surgical patients. Perioperative echocardiography has been shown to influence cardiac anesthesia and surgical management of patients in over 50% of cases in some reports. The essential information provided by intraoperative echocardiography regarding hemodynamic management, cardiac valve function, congenital heart lesions, and great vessel pathology has contributed to its widespread popularity. For example, a recent survey of 155 United States academic institutions reported that over 90% routinely use intraoperative echocardiography.

Numerous investigations have attempted to specifically demonstrate a beneficial impact of intraoperative echocardiography in cardiac surgery. In fact, indications for the utility of perioperative TEE and training guidelines have been developed based upon reviews of the literature and the expert opinions of task force members from the Society of Cardiovascular Anesthesiologists, American Society of Anesthesiologists, and American Society of Echocardiography. Nonetheless, there is a relative paucity of data derived from prospective trials in which the use of intraoperative echocardiography has been randomized among various cardiac surgical patient populations to formally ascertain, rather than simply infer, its putative impact on perioperative decision-making and clinical outcomes.