



ARTICLE OF THE MONTH

A Comprehensive Review of Transesophageal Echocardiography During Orthotopic Liver Transplantation

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Abstract:

“Orthotopic liver transplantation (OLT) is characterized by significant hemodynamic disturbances and anesthetic challenges. Intraoperative transesophageal echocardiography (TEE) can be used to guide management during these procedures. This review examines the role of echocardiography during OLT, presents common TEE findings during each phase of OLT, and discusses the benefits demonstrated with TEE use and the safety of TEE in this patient population. Finally, the authors propose an algorithm for the safe use of TEE during OLT.”

COMMENTS MADE BY CROUCH, CARA MD

Summary:

This article was selected from the August issue of the Journal of Cardiothoracic and Vascular Anesthesia (JCVA) in conjunction with an additional TEE related article (1) this month to discuss the utility of intraoperative TEE during orthotopic liver transplantation (OLT). These two articles both evaluate the prevalence of use, the associated training and other opinions surrounding the expanding role of transesophageal echocardiography within liver transplantation.

The authors identified a goal of discussing the value, prevalence and safety of TEE use during OLT as well as identifying findings that were specifically relevant to liver transplant cases. The authors also discuss the level of training held by current individuals utilizing this monitoring method intraoperatively and the limitations to expanding its use. This article reports that the majority of anesthesiologists agree that TEE should be used routinely for intraoperative monitoring during OLT and that a majority of patients required a change in their management related to findings that were discovered by intraoperative TEE use. The article discusses overall TEE use within liver transplantation, which is upwards of 90% in some reports. The variability in training amongst anesthesiologists that perform intraoperative TEE is discussed and lack of training is identified as one of the major limitations to its routine use in the operating room.

Relevant findings during each phase of liver transplantation are discussed as well as the potential complications associated with each phase. This article highlights a lot of the concerns surrounding intraoperative TEE use in liver transplantation and serves as an excellent summary of the utility of this technology in these cases.

References:

1. Use, Training, and Opinions About Effectiveness of Transesophageal Echocardiography in Adult Liver Transplantation Among Anesthesiologists in the United States. Zerillo, J, Hill, B, Kim, S, DeMaria, S, Mandell, MS. SCVA 2018; 22(2): 137-145

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