



Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
– Virtual Meeting --

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19. A NOVEL METHOD OF EVALUATING LIVER TRANSPLANT SURGERY FELLOWS USING OBJECTIVE MEASURES OF OPERATIVE EFFICIENCY AND SURGICAL OUTCOMES

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Background: Most liver transplants (LT) in North America are performed by transplant surgery fellows with attending surgeon supervision. While there is a strict cut off for the minimum number of cases required for graduating fellows, there are no guidelines on providing constructive feedback to the trainees during fellowship.

Methods: A retrospective review of all adult LTs performed by ASTS-certified transplant surgery fellows at a single academic institution from 2005 to 2019 was conducted. Data from the fellows were averaged to generate reference learning curves for eight variables that were used as surrogates for measuring operative efficiency (i.e. total operative time, warm ischemia time, cold ischemia time) and surgical outcomes (i.e. intraoperative blood loss, unplanned return to the operating room, biliary complications, vascular complications, patient/graft loss). Values for each variable was plotted against the number of LTs in sequential clusters of 15 (1-15, 16-30...75-90). Data for newer fellows were plotted against the reference curves for the eight variables at 3-month intervals to provide an objective assessment of their operative skills.

Results: Reference learning curves were generated for the eight primary variables utilizing data from 830 adult LTs performed by 11 fellows during the study period. Mean age for the patient cohort was 56 years, 67% were males and average MELD at transplant was 21. For the eight primary variables, mean values included the following: total operative time 336 mins, warm ischemia time 29.8 mins, cold ischemia time 309 mins, intraoperative blood loss 1.6 L, biliary complications 20.8%, unplanned return to OR 14.8%, vascular complications 2.9%, 1-year patient and graft survival 92% and 90% respectively. Comparative feedback was provided to the newer fellows through a printed report card and at an in-person meeting with senior faculty at 3-month intervals.

Conclusion: Comparative feedback using institution-specific reference curves can provide valuable objective data on progression of individual fellows during the course of fellowship. It can also aid in the timely identification of areas in need of improvement, which can not only enhance the quality of the fellowship but also has the potential to improve the quality of patient care and transplant outcomes.