

[1081] Best Practices by High Performing Pediatric Liver Transplant Programs.

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The SPLIT group aims to improve outcomes for pediatric liver transplant patients and define significant variations in transplant practice. The predominant drivers of graft and patient demise are hepatic artery thrombosis (HAT) and biliary complications (BC), and thus focused quality improvement (QI) reducing these two complications would immediately impact outcomes.

Center-specific outcomes for HAT and BC were calculated using data from 2005 to 2009 (N=1,115) from the SPLIT registry. The centers with the lowest HAT and BC rates were identified. Surgeons from 20 SPLIT centers responded to a practice-preference survey regarding technical aspects of the arterial and biliary anastomoses. Surgeons from centers with low occurrence of HAT and BC, identified crucial practices protocols that minimized their complication rates. These critical practices were then compared to results from the survey to profile best practices.

HAT rates ranged from 0% to 20% and BC rates ranged from 3% to 35% among 42 centers in North America. Survey of SPLIT surgeons noted broad variations in technical practices. Both HP centers detailed aspects of the surgical team, intra-operative management for both deceased and living donor transplants, and post-operative care. HAT center themes included: high volume surgeons, no-touch technique, Doppler assessment, selective use of conduit, interrupted anastomosis, temporary mesh abdominal closure, no intra-op anticoagulation, post-op low dose anticoagulation, and avoidance of fluid overload. BC center themes: avoid trauma, preservation with HTK, minimization of ischemia time, and interrupted anastomoses.

There is broad variation in HAT and BC rates and operative practice among pediatric liver transplant centers in North America. Dissemination of best practices from the best performing centers will provide guidelines and leverage resources for process improvement. Implementation of this QI model may significantly impact outcomes.

Keywords: Liver transplantation; Pediatric; Hepatic artery; Bile duct

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