

TRANSFISSURAL VERSUS HILAR APPROACH IN LAPAROSCOPIC SEGMENT 8 RESECTION: STRATEGIC ADAPTATION TO RIGHT ANTERIOR GLISSONEAN ANATOMY

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Background : Laparoscopic segment 8 (S8) resection remains technically challenging due to the complex anatomical variations of the right anterior Glissonean pedicle. The tertiary branch approach to segment 8 requires careful consideration of surgical strategy based on individual anatomical variations and technical feasibility.

Methods : Recent anatomical studies have classified the right anterior Glissonean pedicle into four distinct types: cranio-caudal (28.0%), ventro-dorsal (21.8%), trifurcation (39.5%), and quadfurcation (5.7%). Based on these variations, two main surgical approaches have been established: the hilar (transparenchymal) approach and the hepatic vein-guided (transfissural) approach. This study presents surgical video demonstrations of various approaches with their technical considerations and outcomes.

Results : When utilizing the hilar approach, planned S8 segmentectomies occasionally required conversion to right anterior sectionectomy, particularly in cases with complex anatomical variations. The transfissural approach achieved more selective resection of segment 8, preserving the remaining right anterior section compared to the conventional hilar approach. This parenchymal-sparing strategy was particularly effective in cases with complex right anterior Glissonean pedicle anatomy, enabling precise isolation and division of the G8 branch.

Conclusions : The surgical approach for laparoscopic S8 segmentectomy should be planned according to the anatomical variation of the right anterior Glissonean pedicle. For complex cases, the transfissural approach offers a more reliable alternative to the conventional hilar approach, facilitating precise parenchymal-sparing hepatectomy. Representative surgical videos demonstrate the technical aspects and decision-making process in various anatomical scenarios.

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