



Laparoscopic resection of caudate lobe. Technical strategies for a difficult liver segment – Video article



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Caudate lobe of the liver can be divided in three portions: Spiegel lobe, paracaval portion and caudate process [1]. The particular anatomic location of the caudate lobe between the hilar plate and inferior vena cava represents an important obstacle for its laparoscopic removal and a difficult site even for conventional surgery. Therefore are few descriptions of this relatively rare procedure [2]. This video shows a laparoscopic resection of the caudate lobe in a patient with colorectal metastasis. The area to be removed includes the Spiegel lobe and the paracaval portion. Caudate process is preserved. We present in this video the case of a 57 year-old man with colorectal metastasis in segment 1. Liver resection is advised and laparoscopic liver resection is proposed. Four trocars are used. The operation begins with complete mobilization of the left liver and ultrasound examination. Lesser sac is open and Arantius ligament is identified and divided. Spiegel lobe is fully mobilized and carefully detached from the inferior vena cava. The Glissonian pedicle from caudate lobe is identified and controlled [3]. Usually this pedicle does not contain major vessels and can be safely controlled by bipolar forceps. Another option is to encircle the pedicle and use clips to control it [3]. Small veins to vena cava are identified and controlled with bipolar forceps or clips. Dissection progresses towards paracaval portion sparing caudate process (pedicle from right liver). Liver parenchyma is divided with bipolar forceps with saline irrigation and resection is completed. Surgical specimen is retrieved through the umbilical incision. No drains are left in place. Operative time was 120 minutes and there was minimal bleeding. Recovery was uneventful and patient was discharged on the third postoperative day. Final pathology showed colorectal metastasis with free margins. In conclusion, isolate laparoscopic resection of caudate lobe is feasible and can be safely performed in specialized centers. Although partial

resection of caudate lobe is technically feasible and may be easier, in some situations a total caudate lobe resection may be necessary to obtain free margins. An accurate knowledge of the intricate anatomy of the caudate lobe is essential for the success of this operation. This video shows the different steps necessary to perform this complex operation (Fig. 1).

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All authors have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted.

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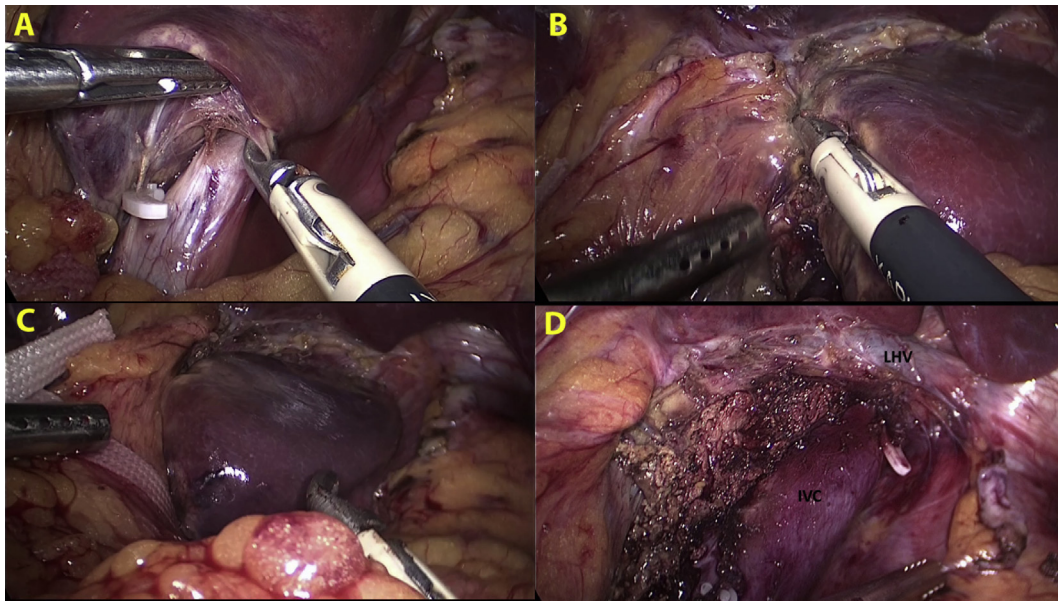


Fig. 1. Main steps for laparoscopic caudate lobe resection. A. Caudate lobe is carefully detached from retrohepatic inferior vena cava. Larger venous branches are controlled with hemoclips. B. Glissonian pedicle from caudate lobe is controlled with bipolar forceps. C. Ischemic discoloration of caudate lobe. D. Final view after resection of caudate lobe. IVC, inferior vena cava, LHV, left hepatic vein.

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