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The Usefulness of the totally intra-corporeal Pringle maneuver with Penrose drain tube during laparoscopic left side liver resection

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Introduction : The Pringle maneuver is generally performed to reduce the amount of blood loss during hepatic resection. During laparoscopic liver resection, the maneuver can be used in several ways. We have developed a new Pringle method with Penrose drain tube to sufficiently control blood loss during liver resection. This study was performed to determine the safety and operative blood loss in hepatectomy performed by this new method.

Methods : We describe the technique and results of the left side liver resection with totally intra-corporeal Pringle maneuver with Penrose drain tube. We performed 20 left side hepatic resections with or without the Penrose Pringle maneuver. We retrospectively compared the short-term operative outcome between these 9 cases and another 11 left side liver resections performed without the Pringle maneuver.

Results : The median length of the surgery using the totally intra-corporeal Pringle maneuver with Penrose drain tube was 221 minutes, the surgical time required for resection without the Pringle maneuver was 160 minutes. The median volume of operative blood loss was significantly lower in the Pringle-maneuver group (218cc vs. 336cc).

Conclusions : The totally intra-corporeal Pringle maneuver with Penrose drain tube for laparoscopic hepatectomy is safe, reproducible, and can facilitate liver dissection during left side liver resection.

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