Glisson capsulectomy for extensive superficial liver involvement in peritoneal carcinomatosis (with video)

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Available online 21 October 2015

Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS + HIPEC) has become the standard of care in the management of peritoneal carcinomatosis from various origins [1]. Achieving a complete macroscopic resection of all the lesions is of paramount importance in the prognostic of these patients. In \textit{Pseudomyxoma peritonei}, the tumor burden is often high but good long-term results can be achieved with extensive complete cytoreductive surgery and HIPEC [2] (Fig. 1).

Due to the peritoneal fluids directional flow, the liver capsule of Glisson is often affected by the disease. In \textit{P. peritonei}, extensive involvement is frequent, but the disease is generally superficial and is not infiltrative. This allows a complete cytoreduction of the disease with a simple resection of the capsule of Glisson without any major liver resection. Destruction methods using electroevaporation with high voltage pure cut can be used on the liver capsule but might not achieved a cytoreduction as complete as a formal resection. Also, capsulectomy is usually faster than destructive methods. Glockzin et al. showed that the combination of CRS + HIPEC and a hepatobiliary procedure could be performed with acceptable morbidity and mortality [3].

Glisson capsulectomy begins with the incision of the liver capsule in an area free of disease. Partial or complete capsule resection can be performed. Dissection in the plane between the capsule and the liver parenchyma is done by blunt finger dissection with the help of electrocoagulation on bipolar scissors. The plane is relatively bloodless, as it does not involve parenchyma resection or major vessel transection. In the case of invasive disease, the procedure can be combined with an atypical liver resection. If the resection is performed quickly enough, no major blood loss ensues and haemostasis is always achieved with gauze pad compression and packing for the remaining of the operation. The major pitfall to avoid is hepatic vein injury at the apex of the falciform ligament as it joins the coronary ligaments. On the right side of the liver, the Glisson capsulectomy can be performed en-bloc with the right diaphragmatic peritoneectomy. Closed suction drains are placed at the end of the operation to control eventual minor bile leakage. This video clearly shows different steps for this surgical procedure.

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http://dx.doi.org/10.1016/j.jviscsurg.2015.08.002
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Figure 1. Video extract.

Glisson capsulectomy allows a quick and complete removal of major peritoneal carcinomatosis burden of the liver capsule, especially in cases of mucinous origin, where the disease is generally non-invasive.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.jviscsurg.2015.08.002.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References

