

## Laparoscopic Assisted Liver Transplantation: A Realistic Perspective

**Safi DOKMAK\***<sup>1</sup>, François CAUCHY<sup>1</sup>, Béatrice AUSSILHOU<sup>1</sup>, Fédérica DONDERO<sup>1</sup>, Ailton SEPULVEDA<sup>1</sup>, Emmanuel WEISS<sup>2</sup>, Alain SAUVANET<sup>1</sup>, François DURAND<sup>3</sup>, Mickael LESURTEL<sup>1</sup>

<sup>1</sup>HPB Surgery And Liver Transplantation, Beaujon Hospital, University Of Paris, FRANCE

<sup>2</sup>Anesthesia-reanimation, Beaujon Hospital, University Of Paris, FRANCE

<sup>3</sup>Hepatology, Beaujon Hospital, University Of Paris, FRANCE

**Background :** Laparoscopic approach is a challenging issue in liver transplantation (LT). In 2019 we implemented a program of laparoscopic-assisted LT (LA-LT) in patients with unresectable liver metastases of neuroendocrine tumors. The aim of this study was to explore feasibility and safety of LA-LT in selected patients.

**Methods :** Total hepatectomy was performed by laparoscopic approach with implantation through an upper midline incision. All liver grafts were obtained from brain death donors and reduction by left lateral sectionectomy was performed when needed.

**Results :** From July 2019–July 2021, six patients (4 women, 2 men) were eligible and were operated without conversion. Median age and BMI were 46 (29–54) and 24 (19–35) kg/m<sup>2</sup>, respectively. The median implanted graft weight was 995 g (629–1556 g), including a reduced (n=3), full (n=2) and a right split liver (n=1). Median surgical time was 405 min (390–450) and median blood loss was 425 ml (250–600). Median cold and warm ischemia times were 438 min (360–575) and 35 min (30–40), respectively. Median anhepatic phase was 51min (40–67) min and midline incision was 14 cm (13–20) long. On POD 5 median prothrombin index and serum bilirubin levels were 95 % (70–117) and 11 (10–37) µmol/L, respectively. Postoperative course was uneventful, with a median hospital stay of 12 days (10–14), and functional recovery was achieved by POD 5 (4–7). After a median follow-up of 5 (4–26) months, all patients were alive without tumor recurrence or adverse event.

**Conclusions :** This preliminary series suggests that in selected patients, laparoscopic-assisted liver transplantation is a safe and effective option, with a potential to reduce post-operative morbidity.

Corresponding Author : **Safi DOKMAK** (safi.dokmak@aphp.fr)