Chirurgia (Bucur). 2017;112(3):259-277
http://dx.doi.org/10.21614/chirurgia.112.3.259

Liver Resections in a High-Volume Center: Form Standard Procedures to Extreme Surgery and Ultrasound-guided Resections

Florin Botea[1], Mihnea Ionescu[1], Vladislav Braşoveanu[1], Doina Hrehoreţ[1], Sorin Alexandrescu[1], Mihai Grigorie[1], Oana Stanciulea[1], Diana Nicolaescu[1], Dana Tomescu[2], Gabriela Droc[2], Daniela Ungureanu[2], Ruxandra Fota[2], Adina Croitoru[3], Liana Gheorghe[4], Cristian Gheorghe[4], Ioana Lupescu[5], Mugur Grasu[5], Mirela Boroş[5], Radu Dumitru[5], Mihai Toma[5], Vlad Herlea[6], Irinel Popescu[1]

[1]Center of General Surgery and Liver Transplantation, Fundeni Clinical Institute, Bucharest, Romania
[2]Center of Anesthesia and Intensive Care, Fundeni Clinical Institute, Bucharest, Romania
[3]Department of Medical Oncology, Fundeni Clinical Institute, Bucharest, Romania
[4]Center of Gastroenterology, Fundeni Clinical Institute, Bucharest, Romania
[5]Center of Diagnostic and Interventional Radiology, Fundeni Clinical Institute, Bucharest, Romania
[6]Department of Pathology, Fundeni Clinical Institute, Bucharest, Romania

Abstract

Background: Liver resection (LR) is the treatment of choice for most benign and malignant focal liver lesions, as well as in selected patients with liver trauma. Few other therapies can compete with LR in selected cases, such as liver transplantation in hepatocellular carcinoma (HCC) and ablative therapies in small HCCs or liver metastases. The present paper analyses a single center experience in LR, reviewing the indications of LR, the operative techniques and their short-term results.

Material and Method: Between January 2000 and December 2016, in "Dan Setlacec" Center of General Surgery and Liver Transplantation were performed 3165 LRs in 3016 patients, for pathologic conditions of the liver. In the present series, liver resections for living-donor liver transplantation were excluded. The median age of the patients was 56 years (mean 58 years; range 1-88), with male/female ratio 1524/1492 and adult/pediatric patient ratio 2973/43.

Results: Malignant lesions were the main indication for LR (2372 LRs; 74.9%). Among these, colorectal liver metastases were the most frequent indication (952 LRs; 30.1%), followed by hepatocellular carcinoma (575 patients, 18.2%). The highest number of resected tumors per patient was 21, and the median diameter of the largest tumor was 40 mm (mean 51 mm; range 3-250). Major resections rate was 18.6% (588 LRs) and anatomical LRs were performed in 789 patients (24.9%). The median operative time was 180 minutes (mean 204 minutes; range 45-920). The median blood loss was 500 ml (mean 850 ml; range 500-9500), with a transfusion rate of 41.6% (1316 LRs). The morbidity rate was 40.1% (1270 LRs) and the rate of major complications (Dindo-Clavien IIIa or more) was 13.2% (418 LRs). Mortality rate was 4.2% (127 pts).

Conclusion: LRs should be performed in specialized high-volume centers to achieve the best results (low morbidity and mortality rates).

Key words: liver resection, surgical techniques, focal liver lesions, single-center experience