ALPPS procedure in 20 patients with primary and metastatic malignancies: single centre experience

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Introduction: The main goal was to assess safety and outcomes of ALPPS procedure and find the optimal compromise between dropout and mortality risk, using our initial single-center experience

Methods: 20 patients who have undergone ALPPS resection at the abdominal surgery department Moscow Oncological Research Institute n.a. P.Hertsen from January 2012 to June 2016 were retrospectively analyzed. Multivariate logistic regression analysis was performed to identify independent risk factors for severe complications, mortality and volume growth of the FLR.

Results: Mean age was 59.1±6.3 (49-72) years. Indications for surgical resection were CRLM in 80% cases and HCC in 20% cases. One patient had salvage ALPPS after failed PVL. Patients were operated for 2.8±1.6 metastases, the largest was 64.6±18.8 mm (40-104). The increase in FLR between the two procedures was 95.3±53.6% (range: 13-164%, p<0.001). The average time between steps of the procedure was 9.4±1.4 days. Severe complications including mortalities (Clavien-Dindo≥IIIb) occurred in 6,7 and 9.1% of patients after ALPPS-1 and 2 respectively. Follow-up median was 20 mo. Medium overall survival rate was 26.1 [22.5-29.6] mo. Medium disease-free survival 24.1 [19.6-28.5] mo. Primary liver cancer, age, histologic changes of liver parenchyma, led to morbidity and mortality rate.

Conclusions: ALPPS should be reserved to a small proportion of patients, the young ones with very small future liver remnant, with the low rate of liver function reserve or experiencing inadequate hypertrophy after portal vein occlusion. For these patients ALPPS could still offer a benefit, being the only chance of resectability.

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