

On-Pump Surgery for Tumors Infiltrating the Heart and Inferior Vena Cava

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Background:

Most patients with hepatocellular carcinoma and thrombosis of the right atrium have a very short survival. Removal of tumor thrombus is done in order to avoid sudden death from pulmonary embolism. Five to 10% of all patients with hypernephroma developed renal vein thrombosis, which can proceed in to inferior vena cava (IVC) and right atrium. It was shown that simultaneous radical nephrectomy and thrombectomy of the IVC result in better long-term survival. The aim of this work is to review our experience with on-pump surgical treatment of patients with abdominal tumors, infiltrating the heart and IVC.

Methods:

From January, 2009 to December, 2012 seventeen patients, 12 male and 5 female with average age 59 years (from 45 to 78) were treated in our center. Two patients have hepatic mass, one have adrenal mass, 13 have renal mass and one have pelvic mass. All have IVC thrombosis. All patients were operated on-pump from hybrid surgical team.

Results:

Radical extraction of the tumor was possible in all patients. IVC thrombectomy was successful in all cases. One patient died during surgery. Among 16 surviving the operation two patients was re-explored for bleeding and three patients required CVVH. In both full recovery of the renal function was observed. One patient died in ICU, because of multi organ failure. No other major complications were observed. All 15 survivors were discharged home. Average hospital stay was 10 days (from 7 to 15 days). Histology revealed hepatocellular carcinoma (1 patient), leiomyosarcoma (1 patient), adrenocortical carcinoma (1 patient), hypernephroma (9 patients), leiomyoma (1 patient).

Conclusions:

Our present study shows that patients with malignant diseases and large hepatic, renal, adrenal or pelvic tumors with IVC thrombosis could be operated on-pump, which guarantees radical tumor extraction with acceptable mortality and morbidity.