



Stepanova Yu.A., Kopacheva V.A., Chekhoeva O.A., Morozova M.V., Miroshkina I.V., Polotbek uulu Zh., Gritskevich A.A., Teplov A.A.

A.V. Vishnevsky National Medical Research Center of Surgery, Moscow, Russia

Introduction. A distinctive feature of renal cell carcinoma (RCC) is the frequent, compared with other tumors, spread of the tumor through the venous collectors (along the renal and inferior vena cava (IVC) up to the right atrium), as the path of least resistance to invasive growth.

Objective: to analyze the data of patients with RCC with tumor invasion of the renal and/or IVC and to evaluate the possibilities of radiology.

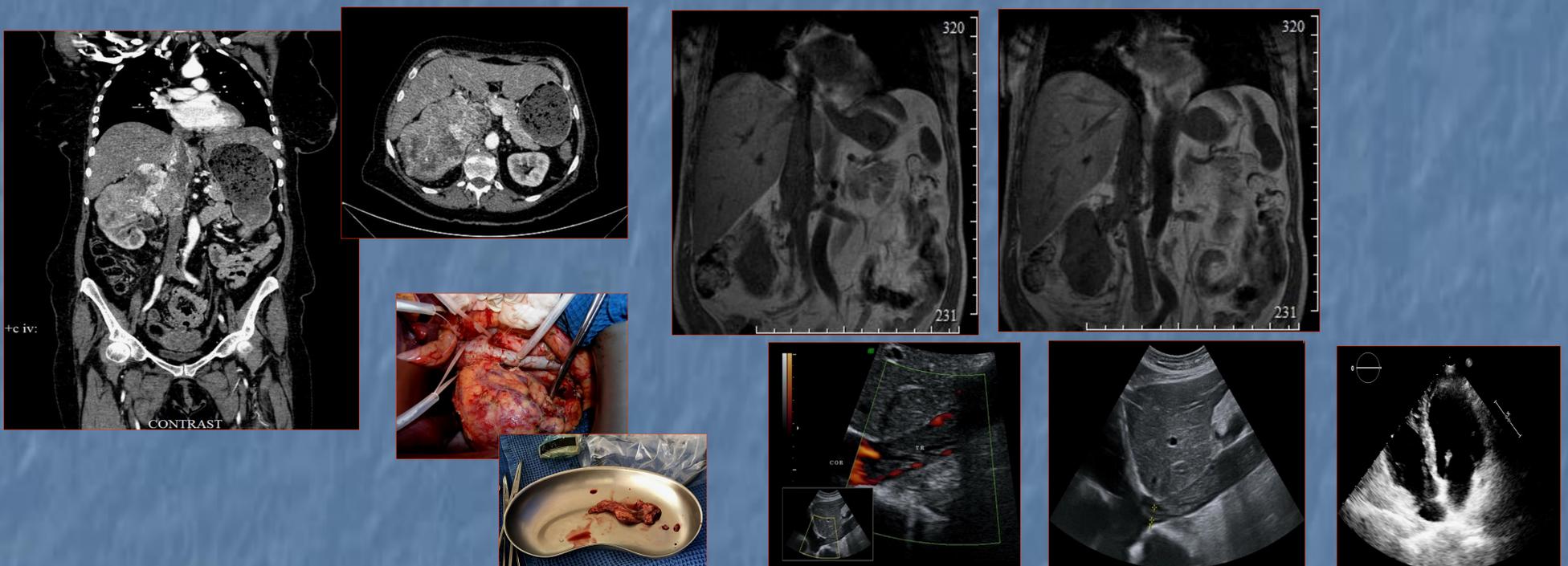
Materials and methods. In A.V. Vishnevsky NMRC of Surgery **35 patients with RCC** with tumor invasion of the renal and/or IVC were treated. At the preoperative stage, all patients underwent US, MSCT and MRI. All patients were operated on.

Results. Tumor thrombus were distributed according to the Mayo Clinic classification: 0 - 10 patients; I – 4 patients; II – 8 patients; III – 10 patients; IV – 3 patients.

The damage of the only kidney with venous thrombosis was at 5 patients (nephrectomy of the contralateral for cancer - 3).

Tumor thrombosis was combined with metastases at 14 (40.0%) patients (synchronous/metachronous).

Target organs: lungs-6; liver-5; adrenal gland-4; lymph nodes-5; pancreas-1; diaphragm leg-1. Process prevalence: metastases in one organ - 9 cases; in two - 2; in three - 3.



Based on the analysis, an algorithm for evaluating a tumor thrombus was developed:

Stage I (preoperatively, US, MSCT / MRI).

- When a kidney tumor with central location is detected, especially with the involvement of the sinus, the lumen of the renal vein is evaluated for the possible presence of tumor thrombosis.
- When they are detected, the level of spread of the tumor thrombus is evaluated. If a thrombus is detected in the IVC, its lumen is evaluated along its entire length to determine the extent of the lesion and the level of thrombus head localization is clearly fixed (note if it is not one).
- When the tumor thrombus spreads to the diaphragm level, it is assessed whether there is its spread in the heart cavity.

It is necessary to note the presence / absence of thrombus biases in the IVC (forced breathing), identify fixation areas if possible.

- Obligatory assessment of the structure of the thrombus and the degree of vascularization.

Stage II (intraoperative US-study).

- After isolation of the IVC, the localization of the thrombus head is assessed with reference in mm to the anatomical structures.
- After clamping the renal arteries and veins, the localization of the thrombus head relative to the previously selected anatomical structure is also assessed, fixing whether there has been a shift as a result of a reduction in blood flow.

Conclusion. Despite the technical complexity of nephrectomy with thrombectomy from IVC, especially in the presence of a suprarenal spread, they have no alternatives when achieving radical treatment. An important aspect of the preparation of such patients is the step-by-step follow-up of the patient using radiology methods, which makes it possible to determine the exact volume of the lesion and non-invasive assessment of the surgical treatment results.