

# **SURGERY FOR RENAL CARCINOMA WITH EXPANDING MASSES IN VENA CAVA INFERIOR. USEFULNESS OF DEEP HYPOTHERMIA AND CIRCULATORY ARREST**

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Expansive renal carcinoma with masses in vena cava inferior is relatively not frequent (up to 10 - 15% pts with renal ca) and not adequately worked out. There are standed out four stages of expansion. In cases of stage I or II, there is possible to remove venous masses directly through caval incision only. Stages III and IV with neoplastic expansion to whole vena cava and / or right atrium need besides nephrectomy the use of cardio-surgical techniques: sternotomy, extracorporeal circulation and deep hypothermia. It allows direct-vision removal of masses using both atrial and caval access on dry operating field. This method was introduced in our institution in 2001. Twenty seven pts (60% male) at the age 22 to 75, and in average 60,7 years with stage III and IV, operated under deep hypothermia with temporary circulatory arrest, are included into the program. Primary neoplasm was located in 81% in right kidney, while in solitary renal carcinoma is founded in about 50%. Hospital mortality was 14,8%, and affected pts with advanced pathology. The remaining 23 pts were observed during 2 to 130 months, in average 34,3 with middle- and long term mortality of 60%. The longest time of uneventful follow-up is 11 years. In the group of deceased pts, the average survival time was 18,6 months (2 - 70). Meanwhile, in the group of survivors, the average observation time is significantly longer, 58 months (2 - 130). This situation is connected with initial advancement of pathology. The survival of first 2 - 3 years after surgery is a good prognostic of further follow-up. Additionally, in 2012 three pts in stage I - II were included into the program. There were no mortality in this group, and the pts are well. To know better the biology of expansive renal carcinoma, and estimation of predestinating gene mutations, the pioneering genetic examinations are introduced.

In spite of advanced pathology, our experience proves the usefulness of development of cooperation between urologists and cardiac surgeons.