CORRESPONDENCE

Important Aspects of Organ-Preserving Surgery for Renal Tumors: Indications, New Standards, and Oncological Outcomes

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Organ Preservation Not 100% Possible

The indication for organ preserving resection of renal tumors has to be considered in some detail. In my opinion, however, it is inappropriate to stipulate that organ preservation is a therapeutic option in 100% of cases of pT1a renal cell carcinoma—on the basis of the guidelines of the European Association of Urology and retrospective registry data of the Homburg working group—for the following reasons:

- Depending on the location—for example, centrally position tumors or those close to the hilum—a decision in favor of tumor nephrectomy can be made in individual cases in pT1a tumors
- In patients with severe comorbidities and continuing necessary treatment with thrombocyte aggregation inhibitors—for example, after coated coronary stents have been implanted—nephrectomy is the preferred option so as to minimize the risk of post-operative hemorrhage
- The EAU guidelines for surgical technique are based on a weak evidence level (IIb-III), which appreciably limits the strength of evidence as the basis for therapeutic recommendations and cannot justify 100% stipulations as a matter of principle
- The absolute or imperative indication for partial resection of the kidney needs to be put in context, although it is firmly anchored in urological terminology. If the complete resection of the tumor (Tx, N0, M0) is not guaranteed by surgical intervention with planned organ preservation then nephrectomy with subsequent (temporary) dialysis should be discussed in the individual case scenario.

The excellent description of the different surgical techniques should be extended by the option of treating parenchymal defects with bioadhesives that activate the clotting mechanism. The advantage of this procedure is that often, purse string sutures can be dispensed with altogether, and clamping the hilar vasculature thus becomes unnecessary and ischemia is avoided.

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Early Detection by Means of Abdominal Ultrasonography

In order to provide organ preserving surgery for as many patients with renal tumors as possible, more emphasis should be placed on the early detection of such changes. Most tumors do not cause symptoms at an early stage; the only chance of early detection would be the to integrate abdominal ultrasonography into the routine examinations after the 35th year of life, which—compared to, for example, preventive colonoscopy after the 65th year—is a simple procedure that does not burden the patient. As far as I know the incidence of renal cancer in Germany is about 40 000/year—a figure that would certainly justify the additional financial expenditure of routine renal ultrasonography.

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In Reply:

It is of course correct that not 100% of all pT1a renal cancers (of less than 4 cm diameter) can be operated on in an organ preserving manner. For the reasons cited, a resection of the tumor is not possible without losing what remains of the kidney in rare cases. All patients are therefore informed before undertaking explorative surgery on the kidney (while trying to preserve the kidney). The decision is made during the operation. However, organ preserving surgery should at least always be attempted. Some studies have reported raised rates of comorbidities and deaths in patients with imminent renal failure (1).

In patients who have to continue taking thrombocyte aggregation inhibitors after stenting (as a rule, for a period of 6 months), I would—for the reasons given above—rather wait for this acute phase than tolerate nephrectomy. Available data about the natural behavior of renal tumors have shown a slow growth of a maximum 1 cm/year and a probability of metastases of only 4% for tumors of less than 4 cm diameter (2).

The EAU guidelines indeed have a low evidence level. Prospective, randomized, multicenter studies are

needed that compare the long term survival and follow up of patients after nephrectomy versus partial renal resection. In my opinion, however, not offering organ preserving surgery in identical conditions is ethically not acceptable. The quality of the available data is just too good, even though they are retrospective.

If an indication has to be defined, obligatory patient information has to include the possibility of a nephrectomy and resultant need for dialysis. However, organ preservation should always be aspired to, by all available means. Pertinent data were presented by ourselves at the 2006 annual congress of the German Society of Urology: after imperative partial renal resection, patients have notably higher survival rates than general patients requiring dialysis (according to the DOPPS database [3]). And quality of life was not even compared in this context!

The option for treating parenchymal defects with bioadhesives that activate clotting is an important additional point. In our hospital this procedure is used in some cases. However, as a rule, purse string sutures are additionally applied and seem indispensable. Partial renal resection without clamping the hilar vessels and thus causing harmful ischemia is possible in some 20% of cases and thus an important addition.

The discussion shows that urologists have discussions with each other; it therefore follows that a certain amount of overtreatment of renal tumors in the specialty is occurring, and that the unknown number of nephrectomies in small renal tumors is probably too high. Patients would therefore certainly benefit appreciably more from partial renal resection performed at a center, as current

data show that the disease course after partial renal resection is no less favorable than otherwise. Further, fewer comorbidities seem to occur after partial renal resection, and the death rate seems lower than after nephrectomy (4).

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Conflict of interest statement

The authors of all contributions declare that no conflict of interest exists according to the guidelines of the International Committee of Medical Journal Editors.