Editorial

Nephron Sparing Surgery

The diagnosis, the histological and clinical classification and the diagnosis on renal cell carcinoma have been changing in the last years.

Even though it is an unusual tumor (it accounts for 2 to 3% of all neoplasms in adults) it continues to be one of the most lethal urologic tumors. About 40% of the patients with the disease will die because of it.

Its incidence has risen between 3 and 4%, probably due to the common use of ultrasound and CT scans usually because of gastrointestinal complains. Because of this, most of these tumors are diagnosed incidentally.

Nephron sparing surgery or partial nephrectomy (PN) was initially described by Czerny in 1890. At the beginning it was indicated in patients with bilateral tumors, solitary kidneys, multiple tumors or in those patients with impaired renal function in whom a radical nephrectomy (RN) could affect it to the point in which dialitic therapy would be needed.

Time has proved PN to be an oncologically safe procedure with a very low affection of renal function. The American Urological Association (AUA), in its Clinical Guidelines for the treatment of T1 renal tumors, establish open PN as the standard treatment for all T1a masses, and as an alternative standard for T1b tumors in patients in whom renal function has to be preserved (1).

The situation that puts on the alarms is that despite the growing evidence that supports the use of PN, around the world –an in our country– the use of this technique continues to be small, and a lot of RN continue to be performed in patients suitable for a PN.

Russo and Huang (2) estimate that in 2008, about 55000 new renal tumors would be diagnosed; 70% of those would measure less than 4cm. However, when evaluating the National Inpatient Sample, Holenback et al., found that only 7.5% of the surgeries performed because of renal cell carcinoma between 1988 and 2002 were PN (3). Similarly when reviewing the SEER database the authors found that in 2001, only 20% of the masses between 2 and 4cm were treated with a PN (4).

The possible causes that explain this situations are a lack of knowledge of the surgical technique by urologists, both also the growing number of minimally invasive techniques like laparoscopy.

The laparoscopic approach, considered a standard treatment for radical nephrectomies, has technical limitations for PN.

It is a technically complex technique that requires a lot of laparoscopic experience from the surgeon. Therefore it is easier for urologists who are beginning their learning curve, to perform a radical nephrectomy instead of a PN. Additionally, there is not a way to perform cold ischemia that allows a better preservation of the global renal function.

Several studies have shown that is it possible to perform a laparoscopic partial nephrectomy with cero ischemia and supra selective vascular control. However, most of these papers come
from reference centers with great experience and a very important number of cases performed, that have the most recent technology including robots and fluorescent markers among others, and most frequently treating small peripheral masses, that are relatively easy to treat. This means that it is not a procedure that is available for most of the urologists, especially in our country.

My purpose is not to discourage people from performing laparoscopica partial nephrectomy; it is a great technique in experienced hands, that shows good oncologic results with an adequate conservation of kidney function.

The point is that more partial nephrectomies have to be performed. Almost every patient with a T1 or T2 tumor, even having a normal contralateral kidney and good renal function should be treated with this technique. If one is not familiar with the procedure, send the patient to a colleague who does have it, who can perform a PN through the approach that he prefers (laparoscopic or open). Never forget that impaired renal function is associated with cardiovascular morbidity and death.

REFERENCES


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