Re: Can Partial Nephrectomy Preserve Renal Function and Modify Survival in Comparison with Radical Nephrectomy?
Medina-Polo J, Romero-Otero J, Rodríguez-Antolín A, et al
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Expert’s summary:
The authors conducted a comparative study on the effect of radical nephrectomy (RN) versus nephron-sparing surgery (NSS) in renal cell carcinoma (RCC) on long-term renal function, oncologic outcome, and overall survival. In the retrospective nonrandomized analysis, clinical and pathologic data were compared between patients treated with RN or NSS. The included patients each had a unilateral <7-cm tumor (T1), excluding those with locally advanced or metastatic RCC.

Patients who underwent NSS had significantly smaller tumors and were more frequently incidentally diagnosed, showing the selection bias between the groups. Renal function was estimated up to 4 yr after surgery. The authors used an abbreviated Modification of Diet and Renal Disease (MDRD4) study equation to estimate glomerular filtration rate. The survival outcomes were evaluated.

The results showed a significant renal function impairment in the RN group compared with NSS (25 vs 7 ml/min per 1.73 m²). This difference was persistent during the follow-up. The data show that patients treated with RN had a greater chance of developing chronic renal failure. There was no difference in cancer-specific survival between the two groups, although a nonsignificant trend toward lower cancer-specific mortality after NSS (p = 0.079) was observed.

Patients treated with NSS had a significantly better overall survival and the authors stated that NSS should be regarded as the primary therapeutic option for patients with pT1 RCC. They concluded that NSS gives a similar oncologic outcome and preserves renal function better than RN. It was also indicated that the better renal function seems to correlate to a lower overall mortality rate.

Expert’s comments:
The data in the present report confirm previous studies comparing outcome after RCC surgery. There are generally applicable data showing similar oncologic control after RN as well as NSS [1,2]. There is no evidence that NSS is inferior to RN when all tumor tissue has been removed.

All small RCCs are not harmless, showing a need for careful preoperative imaging evaluation [3]. There is evidence that a large proportion of patients with RCC have comorbidities, such as hypertension and overweight. Huang et al [4] also claim that of patients with RCCs <4 cm and having a healthy contralateral kidney, 26% have an impaired glomerular filtration rate of <60 ml/min per 1.73 m². This renal function is defined as stage 3 chronic kidney disease, indicating an increased risk for cardiovascular events and deaths. They also showed that patients treated with RN had a higher occurrence of cardiovascular events [4].

A number of studies report that patients treated with NSS have a better overall survival than those undergoing RN [1,3]. This survival advantage was also confirmed after surgery to remove histologically benign renal tumors, comparing NSS versus RN [5]. Actual data, thus, show an advantage of the NSS approach compared with RN in T1 RCC with respect to renal function and better overall survival. RN is recommended only when NSS is not technically feasible, while NSS is considered to be the current standard of care for T1 RCC [6].

Conflicts of interest: The author has nothing to disclose.

References
Re: Chronic Pudendal Neuromodulation: Expanding Available Treatment Options for Refractory Urologic Symptoms

Peters K, Killinger KA, Boguslawski BM, Boura JA

Neurourol Urodynam 2010;29:1267–71

Expert’s summary:
Sacral nerve stimulation (SNS) is a routine treatment today that is utilized in a variety of lower urinary tract (LUT) dysfunctions. This group of authors tested a different approach, placing a tined lead at the pudendal nerve via the ischiorectal approach. Correct electrode positioning was checked by electrophysiologic recording of anal sphincter responses. They treated 84 patients suffering from bladder pain syndrome/interstitial cystitis (n = 42), other pelvic pain (n = 2), urgency/frequency or urge incontinence (n = 26), and nonobstructive urinary retention (n = 13), and 1 subject had urinary hesitancy and fecal urgency/incontinence. An elaborate set of pre-and post-treatment symptom data was collected. Sixty of 84 subjects presented >50% improvement in a subacute test, and 55 of them continued chronic pudendal nerve stimulation (CPNS) by means of an implanted stimulator. Complications were few. There was a highly significant improvement in leading symptoms over 12 mo. This modality seems to be a good alternative in complex problems refractory to simpler solutions.

Expert’s comments:
Dysfunctions of the LUT have many and diverging causes, like inflammation, functional change due to anatomic abnormalities, impaired innervations, and abnormal central processing of afferent impulses. How can appropriate treatments be selected for this variety of disorders in a way that is effective and reasonably simple?

Functional external electrical stimulation was used, sometimes with very good success, in overactive bladder several decades ago, but technical development to make treatments less uncomfortable has been limited. Later, SNS of the third sacral nerve (S 3) using implanted devices became popular. Quite a number of procedures have been on trial. Are all electrical stimulation techniques alike? In fact, there are quite important differences among the various applications. The basic principle is that the stimulus artificially evokes nervous reflexes. Consequently, the site of stimulation is one determining factor for the effect. A number of bladder inhibitory reflex mechanisms prevent involuntary and inappropriate bladder contractions from occurring in specific situations; these reflexes have specific sites of excitation like the clitoris and the penis (reflex is activated during coitus), the anus (activated during defecation), and the lower extremities (activated during walking and jumping). They can be triggered by electrical stimulation of the peripheral sites, provided that optimal stimulation parameters are used [1]. It is quite conceivable that stimulation at these sites (and likewise direct pudendal nerve stimulation) may yield more powerful bladder inhibition than S 3 root stimulation, possibly involving counteracting or less powerful effects, because it includes other sets of afferents than the pudendals. Thus, it is of little surprise that CPNS, as demonstrated in the present paper, appears to be more efficacious than S 3 stimulation in certain LUT dysfunctions. It remains to be determined, though, which modality should be selected to best control a specific condition. This group of researchers seems appropriate to continue to explore this important issue.

The idea of direct pudendal nerve stimulation to treat LUT symptoms is not quite new. Ohlsson et al [2] used it as a more efficacious alternative in cases resistant to surface stimulation. Spinelli et al [3] introduced the technically sophisticated CPNS procedure. We are back to our roots when exploring alternatives to the sacral roots.

Conflicts of interest: The author has nothing to disclose.

References


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