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Editorial

Ongoing Debate on the Management of Small Renal Masses: Should They Be Treated Like Low-Risk Prostate Cancers?

As has been widely acknowledged, the incidence of small renal masses (SRMs) has greatly increased, with most SRMs being detected in a relatively older population. Considering the rapid increase in life expectancy combined with the ever more liberal use of abdominal imaging, we will undoubtedly soon be faced with a flood of newly diagnosed SRMs in an aging population with many comorbidities. In fact, we have already begun to see the early signs of such a trend. Accordingly, the treatment approach of active surveillance (AS) has recently been gaining attention with regard to the management of SRMs. Certainly, AS is widely acknowledged as a treatment option for low-risk prostate cancer. AS is not a new concept for managing renal cell carcinoma (RCC) [1]. However, our improved knowledge of the natural history of SRMs coupled with a growing elderly population have renewed interest in AS for kidney cancers.

Despite some controversy, it is widely accepted that most SRMs follow a relatively indolent course [2]. The mean growth rate of SRMs has been reported to be less than 2 to 3 mm/y. Although it is known that the smaller the SRM, the more likely it is to be a tumor of lower grade and stage and to be nonmetastatic, it is currently not possible to predict the malignant potential of a SRM with high accuracy from the initial size of the SRM. Overall, about 20% of SRMs have a benign histology. Also, controversy continues with regard to the metastatic potential of SRMs. Relevant published data have shown that metastasis can be present at the time of presentation of a SRM. However, the reliability of such data has been questioned, because some data have been shown to be incorrect and the result of human error. For example, a group initially found that 7.8% of all RCCs $\leq$1 cm had M1 metastasis at the time of presentation. However, after an individual case-by-case review, an 88% error rate was demonstrated. There is also the matter to consider of differences in radiographic evaluation and thresholds for diagnosing metastasis among different institutions. In addition, various published surgical series have an obvious inherent selection bias. Until more convincing data are available, the metastatic potential of SRMs can only be feared.

Previously, a meta-analysis of 6,471 SRMs that compared treatments from surgery to AS showed no difference in the incidence of metastases [3]. Also, the findings from a prospective clinical trial of AS for incidental SRMs with pre-AS renal biopsy done in all subjects showed that rapid local progression or development of metastasis is rare during the first 2 years of conservative surveillance [1]. Overall, such data would suggest that delaying active treatment does not adversely affect outcome. Such data can also be considered the basis for advocating an initial period of conservative management with serial imaging in elderly or comorbid patients with SRMs. Meanwhile, although various reports have shown a respectable rate of accuracy and clinical feasibility of renal biopsy, we know from clinical experience that biopsy does not always guarantee a reliable diagnosis.

When performing AS in the management of SRMs, many unanswered questions remain. This is similar to the case of AS for low-risk prostate cancer, as can be seen from the published literature [4]. AS for the two disease entities shares the problems of a lack of universally accepted protocols, including established selection criteria for appropriate candidates and the unknown effect on long-term survival. However, unlike AS for prostate cancer, which is initiated only after confirmation of a low PSA level, a low Gleason score, and clinical stage, there are no definite parameters for physicians to assess when considering AS for patients with a SRM other than the nonstandardized variables of tumor size and sometimes attenuation on imaging. For AS to become a widely accepted form of treatment, a reliable, established protocol for planning and performing AS in the management of SRMs must be available. Currently, enormous efforts are being made to accomplish such a mission with regard to AS for low-risk prostate cancer. A similar approach should be made for SRMs, because we now have only arbitrary cutoffs for tumor size and tumor growing rate for initiating definitive surgical treatment for SRMs. As mentioned by others, for us to have something similar to the D'Amico classification in SRMs,

much more progress is needed. A widely applicable protocol for AS of SRMs would likely incorporate molecular parameters as well as clinical and radiologic variables. Today, the available evidence only fully supports AS for SRMs in older patients with comorbidities. Because we live in the era of evidence-based medicine, I feel that more concrete evidence on the clinical feasibility and safety of AS for SRMs is needed to convince the public and patients as well as physicians. As for low-risk prostate cancer, the development of more accurate means of evaluating SRMs is of utmost importance to free both patients and physicians from unnecessary anxiety.

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