Concerns about renal mass biopsy

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I read with great interest the case report by Abourbih and colleagues. In few last decades, the diagnosis of small renal masses (SRMs) has increased due to the routine use of imaging modalities. Small renal masses represent 48% to 66% of all renal cell carcinomas and only 1% of them will spread to distant metastasis. There is a need to biopsy SRMs to distinguish their behavior by radiologic appearance and to ultimately confirm the diagnosis. In the past, the accuracy of the renal mass biopsy (RMB) was disappointing; now, due to improving techniques it is completely appropriate. Indeed, new minimally invasive treatments for SRMs (such as cryo-therapy, high intensity focused ultrasound and surveillance) made renal mass biopsy more important. Also, in some patients suspicious for metastatic lesions in the kidney, we should perform renal mass biopsy before initiating systemic therapy.

Leveridge and colleagues found that with a new method of computed tomography (CT)-guided renal mass biopsy, the possibility of complications (such as renal hematoma requiring intervention, gross hematuria, pneumothorax, arteriovenous fistula and needle tract seeding) are extremely rare (<1%).

There are concerns about needle tract seeding. From the 6 reported cases on renal tract seeding after renal mass biopsy, transitional cell carcinoma was the pathology of the tumour in most of them—a contraindication of the renal mass biopsy. Moreover, new needle introducers that separate samples from surrounding tissues reduces the probability of seeding and may be why there are no reported cases of seeding after 1993.

Another concern in renal mass biopsies is the non-diagnostic sample, for which there are solutions:

1. Using a CT- or ultrasound-guided biopsy.
2. Using 18-gauge biopsy needles for taking at least 2 samples with 15 to 22 mm length.
3. Targeting peripheral zones of SRMs (to avoid central zone necrosis).
4. Inserting the tip of needle with a distance of 2 to 3 mm of outer margin for taking samples from tumour capsule.

Renal mass biopsies can now be recommended for to diagnose, survey and follow-up SRMs and even it might be able to predict the prognosis of these tumours.

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References


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