Concerns about renal mass biopsy

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I read with great interest the case report by Abourbih and colleagues.[1] In few last decades, the diagnosis of small renal masses (SRMs) has increased due to the routine use of imaging modalities.[2] Small renal masses represent 48% to 66% of all renal cell carcinomas and only 1% of them will spread to distant metastasis.[3] There is a need to biopsy SRMs to distinguish their behavior by radiologic appearance and to ultimately confirm the diagnosis.[4] In the past, the accuracy of the renal mass biopsy (RMB) was disappointing; now, due to improving techniques it is completely appropriate.[4,5] Indeed, new minimally invasive treatments for SRMs (such as cryotherapy, high intensity focused ultrasound and surveillance) made renal mass biopsy more important.[5] Also, in some patients suspicious for metastatic lesions in the kidney, we should perform renal mass biopsy before initiating systemic therapy.[6]

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%).[7]

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.[5] 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.[5]

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.[8]

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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To avoid circumcision complications, avoid circumcision

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The great value of the article by DeMaria and colleagues[1] is their demonstration that even under the most favourable conditions – qualified medical personnel, modern hospitals, the latest equipment, an advanced Western society – circumcision of infants still cannot be performed without an unacceptable incidence of complications and adverse cosmetic outcomes. While it is a commendable achievement to indicate this problem, the paper is less satisfactory in other respects, as I shall briefly indicate.

First, although the authors refer to the recent policy statement on circumcision from the American Academy of Pediatrics,[2] they do not acknowledge that it has been criticized by child health and human rights experts and cannot be taken as a consensus, much less as a definitive, position.[3,4] They appear to be unaware of MacDonald's argument that there is "no new evidence that infant circumcision provides any added benefit to the neonate, infant or young child with respect to HIV and HPV protection. The potential benefit from circumcision only begins to accrue when the male becomes sexually active." While there might be some sense in offering circumcision to young adolescent males (just before the onset of sexual activity), there is no medical justification for circumcision in infancy.[5]

Second, the authors refer to the 2004 circumcision policy of the Royal Australasian College of Physicians, but do not mention the policy issued in October 2010 that took a stronger line against routine infant circumcision, concluding that it is both medically unwarranted and ethically problematic.[6] Furthermore, although infant circumcision remains common in Australia, the practice is in steady decline, with an incidence of less than 15% of boys by age 4 nationally, and far less in some states.[7]

Third, the authors suggest that the cause of surgical complications is lack of skill on the part of the operators, and thus that the problem can be fixed by training. No doubt lack of skill plays a part, but I suggest that the deeper problem lies in the anatomy of the penis.[8] The survey confirms the conclusion of Hugh Young, in a study of circumcision techniques, that no fully satisfactory and entirely safe method has ever been devised and – given the complex and variable anatomy of the foreskin – none is ever likely to be.[9] Unlike a finger, an arm, the gall bladder or the appendix, the foreskin is not a discrete or self-contained member or organ that can easily be detached from the rest of the body. Since it is an extension of the penile skin system, there is no agreed point at which the "foreskin" ends and the rest of the penis skin begins, and thus no clearly-defined point at which the operator should start (or stop) cutting.[10] The structure of the foreskin does not lend it self to neat amputation, but is highly vulnerable to complications and messy cosmetic outcomes.

While I applaud the aim of DeMaria and colleagues in seeking to reduce the incidence of circumcision complications, and thus alleviate infant pain and suffering, I suggest that it would make more sense not to perform circumcision in the first place. A better option would be to direct their skills and resources towards instructing medical personnel and parents in the value of the normal genitalia, the simple rules for taking care of the foreskin, and generally driving home the message that routine circumcision of infants is likely to do more harm than good.

Competing interests: Dr. Darby is an independent scholar and author of numerous works on the history and ethics of male and female circumcision.

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The core of the matter: Using pathology instead of ultrasound to measure prostate volume

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I read the article by Sfoungaristos and colleagues[1] with great interest. The authors reported that prostate-specific antigen (PSA) density represents a strong predictor for Gleason score upgrade after radical prostatectomy. I have some points of concern with this study.

Firstly, the prostate volumes of the patients were calculated with transrectal ultrasound. I think that using the pathology weight could be more objective than ultrasound imaging. Newton and colleagues reported that prostate size was inversely associated with high-grade cancer at final pathology.[2] Small prostate volume was associated with positive surgical margin, extraprostatic extension and pathological Gleason 7 score. Patients' prostate volumes were not mentioned in this study.

Secondly, the number of positive cores with prostate cancer affects the final pathology. The authors reported that tumour volume in a single positive core disease might be insignificant in that indolent tumors are associated with lower positive surgical margins.[3] While Ahn and colleagues reported that upgrading of the Gleason score was significantly higher in single positive core patients than multiple positive cores, Epstein and colleagues reported that upgraded patients had more positive cores than the others.[4] Epstein and colleagues also reported that the other factors for upgrading were age (older), high PSA levels, greater maximum percentage involvement of a given core and a small prostate. The authors did not state the number of positive cores and percentage involvement of cores in this study.

Finally, some studies demonstrate that extended prostate biopsies ($\geq$10 or >12 cores) are associated with less upgrading than sextant biopsies.[4] Sfoungaristos and colleagues reported that upgrading rates were 43.1% in $\leq$12 cores and 42.6% in >12 cores without any significance.[1]

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