

## Standard surgical approach of testis-sparing surgery for testicular tumour with benign or malignant tendency

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Cite as: *Can Urol Assoc J* 2016;10(1-2):66-7. <http://dx.doi.org/10.5489/cuaj.3565>  
Published online February 8, 2016.

We read with great interest the article, “Experiences and outcomes of organ-sparing surgery for testicular tumour with benign tendency” by Liu et al.<sup>1</sup> They retrospectively aimed to assess their experiences and the outcomes of testis-sparing surgery (TSS) for testicular tumour with benign tendency. TSS was performed on 11 patients with testicular tumour. The authors concluded that intraoperative frozen section and routine postoperative pathology showed tumours with benign tendency. Preoperative and postoperative serum sex hormone levels, international index of erectile function (IIEF-5) scores, and semen quality were not significantly different. Their results showed the feasibility and safety of TSS to treat testicular tumour with benign tendency. We respectfully thank the authors for this contribution.

Testicular cancer is the most common tumour in young men.<sup>2,3</sup> Generally, most testicular tumours demonstrate with palpable mass and are malignant in 90–95% of all cases.<sup>2,3</sup> Standard treatment for testicular tumours is radical orchiectomy.<sup>2,3</sup> It has the advantage of definite diagnosis and suitable local tumour control, but the disadvantage of an organ loss in case of benign diseases.<sup>4,5</sup> TSS might be an alternative to radical orchiec-

tomy in select cases. These conditions are small testicular tumours, synchronous bilateral tumours, metachronous contralateral tumours, or tumour in solitary testis in patients for whom tumour volume is <30% of the testis volume and in whom preoperative testosterone levels are normal.<sup>2</sup>

Preoperative comprehensive assessment with physical examination, tumour markers, ultrasonography, and intraoperative frozen analysis (performed by highly knowledgeable practitioners) can lead to better diagnosis of benign and malignant lesions.<sup>2,4,5</sup> In a similar manner to Dr. Liu’s group, in our study TSS was performed on 15 patients who had testicular lesions <25 mm and testicular lesion volume <30% of the whole testis.<sup>5</sup> All patients had normal serum tumour marker levels and ultrasonography evaluation was not extremely suspect for malignancy. In our study, surgery was implemented via an inguinal approach with transient cord occlusion; however, surgery was performed via scrotal approach without the transient cord occlusion.

The 2015 European Association of Urology guidelines state that every patient with a suspected testicular mass must undergo inguinal exploration with externalization of the testis within its tunics.<sup>2</sup> Surgery is performed with the inguinal approach because the first localization of tumour spread are retroperitoneal lymph nodes.<sup>2,3</sup> Unlike the testicles, lymphatic drainage of the scrotum is through inguinal lymph nodes.<sup>3</sup> The standard treat-

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ment of primary testicular cancer remains high inguinal orchiectomy. This approach is the gold standard in the TSS.<sup>2,3</sup> Nonstandard surgical approaches (scrotal violations) were found to increase local recurrence.<sup>6,7</sup>

In conclusion, we strongly believe the findings obtained from the current study will lead to further studies examining the standard surgical approach to perform TSS to treat testicular tumour with benign or malignant tendency.

**Competing interests:** The authors declare no competing financial or personal interests.

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# Discussion of standard surgical approach of testis-sparing surgery for testicular tumour with benign tendency

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Cite as: *Can Urol Assoc J* 2016;10(1-2):66-7. <http://dx.doi.org/10.5489/cuaj.3625>  
Published online February 8, 2016.

It's our great honour to get the response from Dr. Guragac et al to our article, "Experiences and outcomes of organ-sparing surgery for testicular tumour with benign tendency."<sup>1</sup> They give our study pertinent evaluations and suggestions. In their recent study, they also show their experience

with testis-sparing surgery (TSS) for small testicular masses not suspected to be malignant.<sup>2</sup>

According to European Association of Urology (EAU) guidelines, TSS can be attempted in synchronous bilateral testicular tumours, metachronous contralateral tumours, or in a tumour in a solitary testis with normal preoperative testosterone levels, when tumour volume is <30% of the testicular volume and surgical rules are respected.<sup>3</sup> The inguinal incision is generally adopted for spermatic cord occlusion during TSS.<sup>2,4</sup>

In our study, the patients are young, unmarried, or sexually active. The comprehensive preoperative examinations suggest the benign tendency of the testicular mass. The vertical scrotal incision is made to avoid possible damage to the spermatic cord. During the surgery, the mass is gently isolated and resected with surrounding 2 mm tissue. These techniques can efficiently avoid squeezing the tumour and completely excise the lesion. Like partial nephrectomy, appropriate procedure should not increase the risk of tumour spread. However, the suitable incision and surgical approach for TSS need more studies and data. For suspicious cases, inguinal incision and temporary cord occlusion should be performed during TSS.

Organ-sparing surgery is more widely carried out to treat tumours in

recent years. Testicular cancer is the most common tumour in young men.<sup>3,5</sup> TSS for maximal organ retention is beneficial to young patients' physical and mental health. We believe that TSS will get more and more attention. TSS, combined with other methods — new tumour markers, intraoperative ultrasonography, and needle biopsy — will increase the diagnostic and therapeutic safety and efficacy.

**Competing interests:** The authors declare no competing financial or personal interests.

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