LETTERS TO THE EDITOR

Laparoscopic distal ureterectomy for urothelial carcinoma is technically feasible... But is it oncologically safe?∗

La ureterectomía distal laparoscópica por carcinoma ureteral es técnicamente posible, pero... ¿resulta oncológicamente segura?

Dear Editor:

We have read the article entitled “Ureterectomy in the treatment of urothelial carcinoma of the distal ureter” that appeared in the section Surgical Technique of Actas Urológicas Españolas (2013;37(4):249–55). We congratulate the authors for their good surgical technique, although we would like to comment about oncological safety.

In urothelial carcinoma (UC), open distal ureterectomy is considered as effective and safe as nephroureterectomy (NU), even in invasive tumors pT2, allowing simultaneous development of conservative surgery.1

After their appearance and development, laparoscopic and robotic techniques have been increasingly incorporated into uro-oncological surgeries. For laparoscopic distal ureterectomy with bladder reimplantation this is not the case, despite being a fully consolidated technique by open surgery; there are small series, mainly in benign disease, and rare in urothelial carcinoma. In this article, the authors operated 2 patients with UC of the distal ureter and intravesical involvement, and the ureter was not clipped distally during the procedure. In one case, a laparoscopic approach was performed in which proximal ureter was closed with hem-o-lock and bladder cuff was performed through a posterior cystotomy. In the other case a combined approach was developed: the first time with endoscopy using Collings handle, then followed by laparoscopic cystotomy.

In UC surgical management, a high risk of implant failure has been broadly demonstrated. In general, 3 precepts have to be followed in UC surgery: (a) to avoid the opening of kidney collecting system and, therefore, the output of urine containing tumor cells; (b) to remove the surgical specimen en bloc; and (c) to perform a bladder cuff. For this reason, international guidelines recommend for laparoscopic NU open approach with excision of bladder cuff, in which two major principles are: en bloc resection and renal collecting system unopened.2 In complete laparoscopic procedures, in order to avoid UC metastasis, distal ureter has to be necessarily clipped. When these standards are not met, port site metastasis after laparoscopic procedure has been reported.3

In order to demonstrate the high risk of port site metastasis after laparoscopic procedure, we present two cases of aggressive behavior and poor outcome in 2 patients with high-grade tumors treated by laparoscopy. First one was an 82-year-old woman, with solitary kidney diagnosed of tumor in the lumbar level, who underwent distal ureterectomy with uretero-ureteral anastomosis. The second one was a 65-year-old woman with tumor in distal ureter who underwent distal ureterectomy with bladder reimplantation. In both cases, no incidents were reported in the postoperative period. Both patients presented no bladder tumor in previous cystoscopy and in both cases proximal and distal ureter were clipped by Hem-o-lok clips. In the definitive pathological study, both patients were diagnosed of high-grade urothelial carcinoma (T2 and T4) with negative margins. At 4 and 11 months respectively, both patients showed peritoneal metastasis for urothelial carcinoma and died of disseminated disease.

Although laparoscopy allows carrying out many surgical procedures, to take into account oncological implications is necessary. We do not recommend carrying out distal laparoscopic ureterectomy for distal ureter tumor because of the lack of studies of large series of patients confirming oncological safety and, although the evidence is scarce, the death for disseminated cancer is clear.

References


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Response to comments on:
Laparoscopic distal ureterectomy for urothelial carcinoma is technically feasible... But is it oncologically safe?"

Réplica a «La ureterectomía distal laparoscópica por carcinoma urotelial es técnicamente posible, pero... ¿resulta oncológicamente segura?»

The authors question the lack of oncologic safety for the laparoscopic distal ureterectomy (LDU) taking as references the poor outcomes in two patients diagnosed of distal ureter tumor who underwent this technique,1 and a case referred in the literature in which urothelial carcinoma misdiagnosed as tuberculous atrophic kidney, showed port metastasis after laparoscopic nephrectomy. This fear reminds too much of the old dilemma about if laparoscopic nephroureterectomy should be considered a oncologically safe technique by itself.2,3 In contrast, good outcomes and no tumor relapse lasting more than two years have been obtained by us in 2 cases operated for DUT. Besides, we would like to show this dilemma suitably. For this reason, we describe in our article 40 cases of DUT, divided into several series, treated with LDU and with good outcomes.4 New publications are appearing, like McClain et al. manuscript describing favorable outcomes in 6 patients who underwent robotic technique.5 They conclude that robot-assisted LDU is an oncologically safe procedure for the treatment of low-grade urothelial carcinoma. In our series, both were low-grade cases, and therefore we must wonder: is it justified to perform nephroureterectomy in low-grade DUT?, or is it justified not to take advantage of the benefit of laparoscopy in low-grade tumors due to 'rather theoretical and not significant' risk of seeding?6 If distal or open segmental ureterectomy has been accepted as alternative for the treatment of DUT, let me ask you: Why LUD or robot-assisted ureterectomy cannot offer oncological safety? In laparoscopic nephroureterectomy series not showing an increased local relapse, the risk of tumor seeding has not been confirmed. By other side and reviewing the literature, the risk of tumor seeding by bladder rupture can also be considered minimal.7

As Gaya and Palau say, limited manipulation and en-bloc removal of the operative specimen are major oncological precepts for the treatment of DUT.1 Delicate and meticulous surgical execution, even higher in those cases of open surgery with magnified view and developed by experimented hands, are guaranteed by the improvement in laparoscopy and the acquisition of laparoscopic skills. Furthermore, the risk of seeding in laparoscopy can be considered equivalent to the risk of open surgery, since this is limited by the immediate sacking of the resected segment of the ureter performed in laparoscopy. Other basic precept in order to avoid the opening of renal collecting system is to clip the ureter distally and proximally. However, in those cases in which tumor reach to ureteral meatus it is not always possible to place a clip of Hem-o-lok, and furthermore, in these cases the clipping may propel tumor cells into the cavity. For this reason, in one of our cases distal clip could not be placed. This risk also is observed sometimes in open surgery. Finally and equal to conventional surgery, a bladder cuff was carried out in both cases.

It is totally logical and understandable that there are reticences in terms of the oncological safety of LDU, mainly in high-grade urothelial tumors. This is because there are still few publications in this regard given that there is not enough scientific evidence supporting it, but it is undeniable that with the advent of robotic surgery there is a rise of the LDU4 which might lead to questioning the fact that the lack of publications is due not only to the doubt on the oncological safety, but also to the complexity of the procedure laparoscopically that Gaya and Palau assume. Something similar is taking place with renal tumors higher than 4 cm. Some years ago, open partial nephrectomy was recommended versus laparoscopic procedure (because of technical difficulties, positive margins risk and the possible impairment in the renal function). The evolution of laparoscopic technique and the acquisition of laparoscopic skills are also changing this paradigm. We have exposed this reflection although it is not possible to compare the behavior of urothelial tumors with the renal tumors.

The most predictive prognostic factors in the treatment of DUT are histological grade and lesion stage. Thus, the success key in the laparoscopic or robotic DU must be the appropriate patient selection.5,9 More series and comparative studies are required in order to define true role of LDU in the DUT;7 however it is possible that paradigms could change with the evidence. For this reason we think that this kind of experiences (like the reported by Garcia-Segui et al.),1 regarding the fundamental oncological principles, must be published in order to accumulate


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