

Forgotten intraabdominal tumor during laparoscopic partial nephrectomy. lesson to be learned

Abstract

Objective: To report a case of forgotten intraabdominal renal tumor due to a self-performing retrieval bag failure, its management and lessons learned.

Case Report: A 72 years old man underwent a laparoscopic partial nephrectomy due to 3cm renal tumor. A plastic self-performed retrieval bag was used for specimen extraction. Immediately after surgery, with the patient awake, the tumor was not inside the bag and this was broken at the bottom. A computer tomography showed a small mass next to the renorrhaphy; therefore, an exploratory laparoscopy was performed. The tumor was located over the sigmoid colon and finally extracted.

Conclusion: In order to avoid this complication some lesson can be learned. Retrieval bags must be tested previously and watched during its extraction. Surgeon must verify the bag and the intact specimen integrity before the surgery is finished and the incision must be as large as possible to avoid any traction of the bag.

Keywords: partial nephrectomy, laparoscopy, complications

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Introduction

Partial nephrectomy (PN) has become the standard of care for renal masses feasible of nephron sparing surgery since different studies demonstrated equal oncological outcomes and, even more, better functional outcomes compare to radical nephrectomy.¹ Both, open and laparoscopic PN, represent a surgical challenge needing a correct selection of cases. Worldwide, laparoscopic partial nephrectomy (LPN) has been gaining a place due to minimal invasive advantages such as less hospital stay, pain and estimated blood loss.² However, laparoscopic skills are needed in order to perform a correctly renorrhaphy in a limited time. Compare to open approach, laparoscopic surgeries need additional modern instruments and different expensive surgical devices such as hemostatic agents (clips or thrombin sealant, fibrin glue, oxidized methylcellulose and gelatin matrix) or retrieval bag in order to avoid tumor cells implant.³

In underdeveloped countries, with the objective of decrease surgical costs, many alternative devices are self-performed with all the risks that this means. Our aim is to describe a case of intraabdominal forgotten tumor during laparoscopic partial nephrectomy due to self-performed retrieval bag rupture and mention different lesson learned.

Case report

A 72 years old man was diagnosed with a small left renal mass incidentally during an ultrasonography for to an aortic abdominal aneurysm. A computer tomography (CT) scan confirm an exophytic 3cm left renal mass; therefore, an unclamped-laparoscopic partial nephrectomy was performed without difficulty. The tumor was placed inside of a plastic self-performed thermofused retrieval bag (Figure 1) and extracted trough a 12mm laparoscopic port. Finally, a drain was also placed close to the renorrhaphy. The patient was taken to the hospital room and in that moment, we realized that the bag was broken and the tumor was not inside. With the patient and family consent, a CT scan was performed showing a small mass next to the renorrhaphy (Figure 2); therefore, we decided to underwent an exploratory laparoscopy using the same port and patient position.

Once laparoscopic camera was introduced, the tumor was found over the sigmoid colon slightly adhered (Figure 3) and extracted inside of a surgical glove. The hospital stay was 3 days with no perioperative complications and the final histopathological finding was a 2cm cromophobo renal cell carcinoma with negative surgical margins.

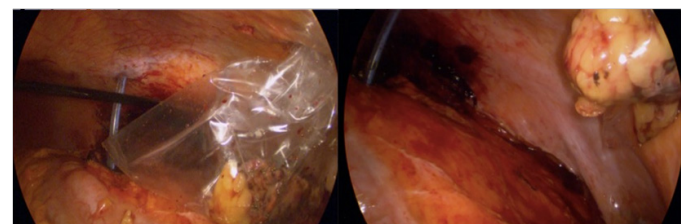


Figure 1 Left: Plastic self-performed retrieval bag with the tumor inside. Right: broken bag at the time of tumor extraction.



Figure 2 Computer Tomography show the small renal mass close to the renorrhaphy.

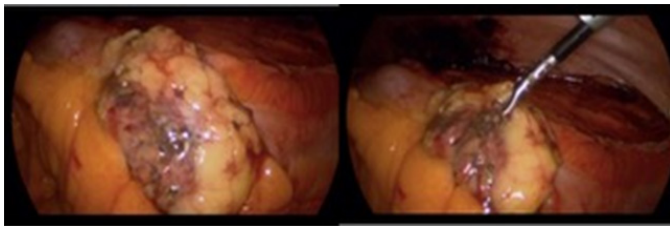


Figure 3 Tumor over the sigmoid colon.

Discussion

Partial nephrectomy is now the standard of care for small renal masses because it has the same oncological outcomes and better functional outcomes compare to radical nephrectomy. Laparoscopic partial nephrectomy is worldwide increasingly due to minimal invasive advantages especially avoiding the so painful incision as lumbotomy and showing similar results compare to conventional approach. Nevertheless, LPN need to be performed in an experience laparoscopic surgeon accompanied by technology and different devices such as clips, preferably Hem-O-lok clips (Weck Surgical Instruments, Teleflex Medical, Durham, North Carolina), hemostatic agents, vessel seal instruments and retrieval bags. Despite they are not strictly necessary; they facilitate and increase surgical outcomes. Some of them cannot be replaced; however, others could be self-performed like retrieval bags in order to decrease surgical costs, position that occurs frequently in underdeveloped countries. In this case report, retrieval bag was broken during its extraction leaving the specimen inside even when it was gently extracted. Any report has been published in the literature that allows what to do in similar circumstances. Many questions were discussed such as leave the tumor inside knowing that only 24% of these small renal masses have an aggressive histology,⁴ there are no literature that described natural history of leaving these tumors inside; to reexplore surgically, the so

small tumor was going to be found or which surgical position is going to be opted. Fortunately, the tumor was easily located with the patient placed in the same position described for transperitoneal laparoscopic renal access.

In conclusion, different mistakes were committed and some lesson can be learned. First, retrieval bags must be tested previously; second, the retrieval bag must be watched during its extraction; thirds, once the tumor was extracted, surgeon must verify the bag and the intact specimen integrity before surgery is finished and finally the incision should be as large as possible to avoid any traction of the bag.

Acknowledgments

None

Conflicts of interest

Authors declare there is no conflict of interest.

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