

LAPAROSCOPIC RADICAL PROSTATECTOMY: REPORT OF INITIAL 22 CASES BULGARIAN UROLOGICAL PRACTICE

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Summary. The urological laparoscopy is not widely used in Bulgaria. We report our early experience with 22 cases of laparoscopic radical prostatectomy in Bulgarian urological practice. Aim of the paper was to report and analyze our initial experience with laparoscopic radical prostatectomy for clinically localized prostatic cancer. Between March 2005 and December 2007, 22 consecutive patients underwent laparoscopic radical prostatectomy in a single urological center according to the "Montsouris technique", performed by one surgeon. The median age was 60,5 year old, the median preoperative prostate specific antigen 12 ng/ml and the median Gleason score of biopsy specimens was 6. Median operation time was 420 minutes (range 300 to 660). Median value of postoperative hemoglobin blood test was 120.5g/L (range 99 to 144 g/L). Median postoperative Foley catheterization period was 14 days (range 5 to 30). Intraoperative complications related to operation procedure were three bladder injuries, treated laparoscopically, one rectal injury and one case of paraurethral urinoma. No conversion to open surgery or reoperation was required in all cases. Although the operation time is still longer than that of conventional open procedures, we believe that operative time will decrease with more experience.

Key words: *laparoscopic radical prostatectomy, initial experience, Bulgaria*

INTRODUCTION

Laparoscopic radical prostatectomy was first reported by Schuessler et al in 1992 [7]. In 1999, Bertrand Guillonneau and Guy Vallancien described their technique of radical laparoscopic prostatectomy, called "Montsouris" [2, 3, 4]. The first radical laparoscopic prostatectomy in Bulgaria was made in 2003 by guest operator from Germany.

The first laparoscopic radical prostatectomy by Bulgarian urological team was performed in our clinic in April 2005. We report our first 22 cases of laparoscopic transperitoneal radical prostatectomy.

MATERIALS AND METHODS

Between March 2005 and December 2007, 22 patients with clinical stage T1c to T2b with biopsy proven prostatic cancer underwent laparoscopic radical prostatectomy. All cases were managed by one operator – urologist and urological team, without general surgeons. The median age of patients was 60,5 years (range from 49 to 73), the median preoperative prostate specific antigen 12 ng/ml (range from 3 to 37 ng/ml) and the median Gleason score of biopsy specimens was 6. We applied the Montsouris technique. We used five trocars (two 10-mm and three 5-mm trocars) and the operation was performed transperitoneally. In the first ten cases, we used Hasson access for pneumoperitoneum. In the last cases, it was used the Veress pneumoperitoneum with five trocars in “W” configuration. Urethrovesical anastomosis was performed with 4 to 6 interrupted 3-0 absorbable sutures. The Foley catheter size was 24 and 22 Charier. Preoperative bowel preparation was done with oral laxative medications. Low molecular heparin was used in the operation day and till the end of hospitalization. Antibiotic prophylactics with third generation cefalosporine was applied for 5-7 days. Cystography was done on the 7th postoperative day and catheter was removed.

RESULTS

Median operation time was 420 minutes (range 300 to 660). Median value of postoperative hemoglobin blood test was 120.5 g/L (range 99 to 144 g/L). Median postoperative Foley catheterization period was 14 days (range 5 to 30). Intraoperative complications related to operation procedure were three urachus vesical injuries, which were treated laparoscopically by absorbable suturing. One rectal injury on cystography on the 7th postoperative day, was treated with bladder catheter for three months. No conversion to open surgery or reoperation was required in all cases.

The first cases were operated for 660 minutes. The urethrovesical anastomosis was made trough the mini Pfannenstiel incision because of the difficulty of intracorporeal anastomotic suture. The next 21 procedures were completely intracorporeal. The median operative time in the last ten cases was 360 minutes. The postoperative hemoglobin values were between 99 and 144g/L – median 120.5. There was no blood transfusion and no conversion in open procedure. The postoperative pain in the major its of patients was minimal and needed analgesia for one or two days. On the 7th postoperative day we did cystography and catheter was removed in case of no extravascular contrast. In one case, we noted bowel contrast. It was anastomotic-bowel fistula, examined with cystoscopy. The patient was in a good condition. He agreed with prolonged catheterization. We did this for three

months and on the cystography there was no fistula. The patient was fully continent. We had one case of paraurethral urinoma, threatened with bladder catheterization for 20 days. On the 30 day after catheter removal we had no hard incontinence. We observed good early continence in younger patients aged 50-60 years. In patients over 70 years, completely continence was achieved about the end of the first year. There were no incontinent patients among from all 22 cases. No postoperative surgical complications such as hydronephrosis, urine retention, ileus, peritonitis, no metastasis in trocar sites were registered. One year later one of the patients had a bilateral inguinal hernia and required operation.

ONCOLOGICAL RESULTS

There were positive surgical margins in first cases in right neurovascular bundle. These patients required x-ray postoperative therapy with best results. All other cases had postoperative prostate specific antigen on the 30th postoperative day no more than 0.02 ng/ml. Four of cases had pT3b stage and received postoperative x-ray therapy. Two of them underwent subcapsular bilateral orchiectomy. One patient with Gleason 9 had a local recidiv and liver metastasis.

DISCUSSION

Cancer of the prostate is one of the main problems of recent urology. Nowadays, there are diagnostic methods for the early diagnosis of prostate cancer. That is the reason to promote new operative techniques. The laparoscopic radical prostatectomy was performed in 1992 by W. W. Schuessler. Now this operation is possible with retroperitoneal and also robotic procedures. In 1999, the authors Bertrand Guillonneau and Guy Vallancien described their technique of radical laparoscopic prostatectomy, called "Montsouris"[2, 3, 4]. We performed this technique in our initial experience. We find this procedure easier than the extraperitoneal one, because of the much better vision and operative field. It has clear anatomical markers, which is good for beginners. We were criticized by our colleagues concerning operating time in the beginning. In the literature, we found the same initial results. G. Kawabata et al. report median operating time of 450 minutes (range 290 to 750) [6]. Estébanez Zarranz J. et al. report 356 minutes (540-240), which is our operating time in the last ten cases [1]. In their first 65 cases, Bertrand Guillonneau and Guy Vallancien report mean operating time of 267 minutes with lymph node dissection. Despite of their technique for anastomotic suture, Bertrand Guillonneau and Guy Vallancien report difficult urethrovesical anastomosis via a mini-Pfannenstiell incision in three cases in the beginning of their experience [2]. We found, that the anastomosis is the most difficult part of the laparoscopic prostatectomy, and needs more laparoscopic experience.

CONCLUSION

Based on the initial experience with our 22 patients, we can confirm that laparoscopic radical prostatectomy can be applied by urological team with initial laparoscopic skills. The operating time can be longer in the beginning, but the post-operative results are good for the patient and the complications are rare. Our initial experience encouraged us to perform this procedure in our practice.

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