

### **Retroperitoneal Laparoscopic Radical Prostatectomy**

Mircea Onaca<sup>1,2</sup>, Gheorghe Nita<sup>1</sup>, Marcian Manu<sup>1</sup>, Leon Adou<sup>1</sup>, George Tie<sup>1</sup>, Catalin Copăescu<sup>1</sup>

<sup>1</sup>Ponderas Academic Hospital, Bucharest, Romania

<sup>2</sup>Saint Antonius Hospital, Utrecht, The Netherlands

#### **Abstract**

*Introduction:* Retroperitoneal Laparoscopic Radical Prostatectomy (RLRP) has been introduced in our department as the first line treatment for patients with localized prostatic cancer and life expectancy over 10 years. At the time, the surgical team had already extensive experience in minimally invasive urologic surgery. Our aim is to describe the laparoscopic technique we currently use and to analyze our oncologic and functional results.

*Patients and Methods:* All the patients who underwent RLRP in our institution (PONDERAS ACADEMIC HOSPITAL) from January 2015 to March 2017 were included into a prospective study. The standard preoperative protocol included blood tests, prostate biopsy, pelvis MRI and bone scintigraphy, while the particular therapy was discussed and approved by the Institutional Multidisciplinary Tumor Board. In all the 45 cases, RLRP was indicated for localized prostate cancer.

*Results:* The average patient's age was 68 years (range 45 – 74 years), mean preoperative prostate

specific antigen (PSAi) level was 8 ng/mL (range 3–15 ng/mL) and prostatic volume between 26 and

52 cc. The laparoscopic approach was completed in all 45 cases – no conversions to open surgery. Bilateral nerve sparing was performed in 7 cases (16%) and unilateral in 23 cases (51%). The mean

operative time was 165 minutes (range 120 - 240 min), while the average blood loss was 255 mL

(range 20–800) and two patients received blood transfusions. The mean catheterization time was 10 days (range 7–14 days). Positive surgical margins were observed in 8 cases (17.7%). Overall, 86% and respectively, 93% of the patients were continent during the following 3 and 6 months. 51% of the patients had erectile dysfunction 6 month after the intervention. Four complications were encountered: intraoperatively - rectal injury (1 case) and postoperatively - bleeding (2 cases) and stenosis at the vesicourethral anastomosis (1 case). No mortality or late morbidity encountered.

*Conclusions:* The radical laparoscopic prostatectomy is a safe and efficient procedure for localized prostate cancer with minimal complications and short hospitalization time, but it requires an experienced team of laparoscopic surgeons. The functional and oncological outcomes of LRP are expected to be improved as the medical team experience is extended.

**Key words:** prostatic cancer, laparoscopic prostatectomy, retroperitoneal approach, laparoscopic urologic surgery