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## **Complications of pelvic lymphadenectomy in a consecutive series of 1000 patients undergoing radical prostatectomy between 1993 and 2004**

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### **Introduction & Objectives:**

A single centre experience concerning perioperative complications caused by pelvic lymphadenectomy [pLA] in patients undergoing radical retropubic prostatectomy [RRP]. In addition the influence of the extent of pLA on the complication rate was determined.

### **Material & Methods:**

In a prospective trial intra- and postoperative complications of 1000 consecutive patients who underwent RRP and pLA were documented between 07/1993 and 10/2004. Postoperative complications were defined as events occurring within 30 days following operation. Therefore data after discharge from hospital were collected retrospectively using a standardized questionnaire. Finally those complications caused selectively by pLA were extracted and analyzed statistically.

### **Results:**

739 patients underwent a limited and 232 an extended pLA. In further 29 cases data was missing. The perioperative antithrombotic therapy included graduated compression stockings and subcutaneous injection of low-dose unfractionated heparin administered exclusively in the upper arm. Intraoperatively there were 2 obturator nerve injuries observed. Postoperative complications caused by pLA were relevant bleeding of the obturator artery (1) and symptomatic pelvic lymphocele (40). From the patients with lymphocele 4 (10.0 %) developed a deep vein thrombosis and 2 of them (5.0 %) additionally pulmonary embolism. Further 2 patients (5.0 %) showed an infection of the lymphocele. 960 patients without lymphocele were affected by deep vein thrombosis 10 (1.0 %) and by pulmonary embolism 5 times (0.5 %). Following limited pLA 15 lymphoceles (2.0 %) were observed whereas 16 cases were observed (6.9 %) after extended lymph node dissection [ $p < 0.01$ ]. All postoperative complications caused by pLA together required reoperations in 22 patients (2.2 %). Those

reoperations were in detail laparoscopic lymphocele repair (12), percutaneous lymphocele drainage (7), open surgical lymphocele repair because of complicating infection (2) and relaparotomy for hemostasis within the area of the obturator artery (1). In 18 cases conservative treatment of the lymphoceles was sufficient. Patients with pelvic lymphocele showed significantly higher rates of deep vein thrombosis, pulmonary embolism and reoperation [ $p < 0.01$ ].

### **Conclusions:**

The leading complication of pLA is the development of pelvic lymphocele, which in turn significantly increases the risk of thromboembolic events. Further on it was obvious that the extent of pLA influences the occurrence of pelvic lymphocele. Considering this the decision for pLA and its extent ought not to be made thoughtlessly.