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A modification for controlling the dorsal vascular complex in endoscopic extraperitoneal radical prostatectomy

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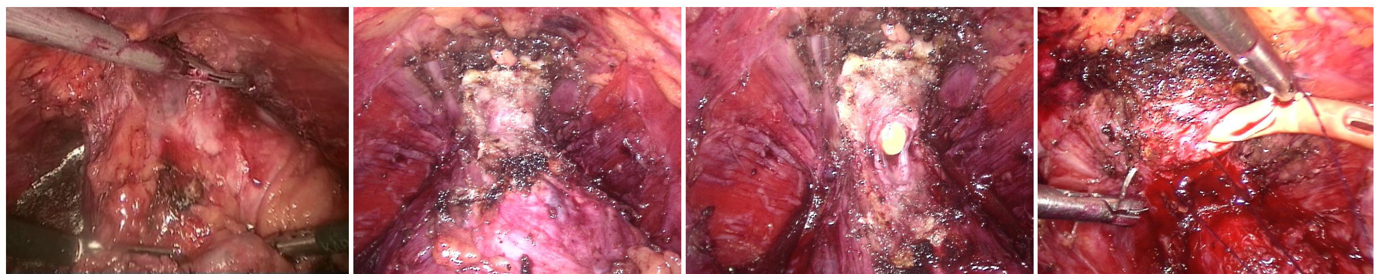
Introduction

Controlling the dorsal vascular complex (DVC) in endoscopic extraperitoneal radical prostatectomy (EERPE) by (selective) suture ligation remains a challenging step during apical dissection of the prostate. In this study we report our results of the first 212 cases in which ligation of the DVC was omitted. The aim was to evaluate the consequences of this sutureless transection in terms of blood loss and oncologic control.

Methods

Between January 2006 and September 2011 212 patients underwent an EERPE for clinically localized or locally advanced prostate cancer in two different centers. All patients were operated by the same urologist. One hundred and forty-three patients (67.5%) simultaneously underwent an extended laparoscopic pelvic lymph node dissection (LPLND). EERPE was performed according an antegrade manner, as described by Stolzenburg. After complete dissection of the prostate the DVC was selectively divided using bipolar forceps and harmonic scalpel. Blood loss, transfusion need, operative time, pathological stage, margin status and complications were evaluated.



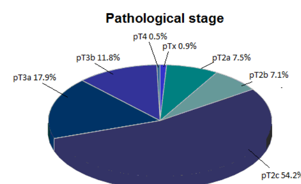
Transection of puboprostatic ligaments — *Membranous part of urethra, after DVC transection* — *Cold transection of the urethra* — *Making of the anastomosis*

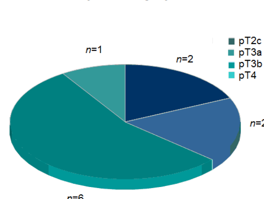
Results

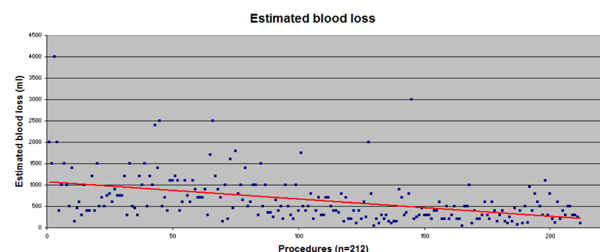
PREOPERATIVE CHARACTERISTICS	
Mean + range	
Age (y)	64 (44-74)
PSA (ng/ml)	13.2 (0.87-190)
Prostate weight (g)	38.9 (10-100)
Mean Gleason score	6.3

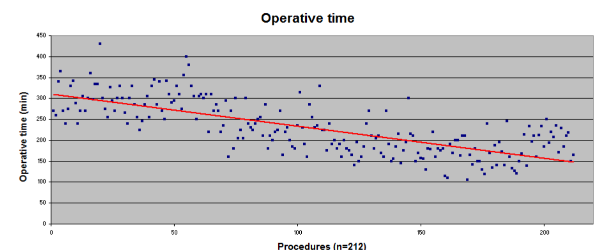
PEROPERATIVE OUTCOMES	
Median + range	
Estimated blood loss (ml)	500 (40-4000)
Catheterization time (days)	14 (10-105)
Operative time EERPE + LPLND (min)	245 (120-430)
Operative time EERPE (min)	170 (105-364)
Length of stay (days)	4 (2-56)
No (%)	
LPLND	143 (67.5)
Nerve sparing	133 (62.9)
Bilateral nerve sparing	54 (40.1)
Unilateral nerve sparing	77 (57.9)
Blood transfusion	9 (4.2)

PATHOLOGY	
Positive margins No. (%)	
Overall	77 (36.5)
T2	37 (25.3)
T3	40 (61.9)
Apical	41 (53.2)









Conclusion

Sutureless transection of the DVC in EERPE is a feasible modification and is associated with an acceptable blood loss and oncologic control. It is not associated with a risk for additional complications. Because the 212 patients in this study were part of the surgeon's learning curve even better results are to be expected over time. Functional outcomes of this technique need to be evaluated.

ICC ghent bau2011