

Re: Surgical Technique Using AdVance™ Sling Placement in the Treatment of Post-Prostatectomy Urinary Incontinence

David E. Rapp, W. Stuart Reynolds, Alvaro Lucioni, Gregory T. Bales

Section of Urology, Department of Surgery, University of Chicago Pritzker School of Medicine, Chicago, USA

Int Braz J Urol, 33: 231-237, 2007

To the Editor:

I am responding to the AdVance™ surgical technique paper that was recently published (1). The technique was first described by Rehder & Gozzi and the early results recently published (2). We want to draw attention to a few points of technique that seem very important built on our experience. The authors have performed more than 80 cases of AdVance™ since February 2006 in a wide range of patients.

The positioning of the patient is critical, as it should not be in extended dorsal lithotomy. Placing and tensioning the sling in this position might cause it to be loose once the legs are back in the supine position. This operative technique is based on providing dorsal support to the sphincteric urethra, which is not given when the sling is loose. The dissection on the urethral bulb is such as to mobilize it, and it is not continued for 4 cm beyond the perineal body as is stated in the article. This means that the bulb should be mobilized until a proximal movement of the proximal bulb becomes possible. When fixing the central portion of the mesh to the mobilized bulb, the distal sutures are most important, necessitating up to three sutures with a 2-0 resorbable suture. The idea is to proximally move and rotate the dorsal surface of the proximal bulb proximally utilizing a broad surface on the bulb. By doing this, the prolapsed dorsal surface of the sphincteric urethra is indirectly supported without causing direct compression on the urethral lumen. A cystourethroscopy during the procedure is not necessary, as the level of dissection and operation is below the pelvic floor and urethra. However,

it is of critical importance to make the diagnosis pre-operatively, to be able to determine the correct operative indication.

During examination of the stress incontinent patient, the following findings are helpful. The urethroscopy should be carried out in neutral dorsal lithotomy under local anesthesia of the urethra (lidocain gel). With gentle pressure of the pointed index finger directly to the midperineum well dorsal of the level of the membranous urethra the dorsal surface of the proximal bulb should be proximally displaced. A concentric coaptation (occlusion) of the urethral lumen should be appreciated indicating towards possible success with the AdVance™ sling. When this concentric coaptation cannot be obtained because of large sector defects to the sphincter or severe fibrosis limiting urethral mobility, then this patient should rather be indicated for a compressive device.

Postoperative care should include instruction to limit physical activity especially leg spreading, as this may loosen the sling leading to urinary incontinence again. The AdVance™ sling is the only product on the market focusing on restoring normal anatomy in male stress urinary incontinence (SUI). In October 2005 Gozzi & Rehder were the first to report on the possibility that urethral prolapse and dorsal sphincteric urethral descent may play a role in male SUI, and restoring this prolapse leads to the restoration of continence (Abstract at the SIU Meeting on Prostatic Disease: Recent Advances and New Technologies. Bariloche, Patagonia, Argentina).

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**Dr. Peter Rehder &
Dr. Christian Gozzi**
*Neurourology Unit
Medical University Innsbruck
Innsbruck, Austria
E-mail: peter.rehder@i-med.ac.at*

Re: Adverse Events and Readmissions after Day-Case Urological Surgery

Alvaro Paez, Enrique Redondo, Ana Linares, Emilio Rios, Jorge Vallejo, Margarita Sanchez-Castilla

Department of Urology and Department of Anesthesia, Hospital De Fuenlabrada, Madrid, Spain

Int Braz J Urol, 33: 330-338, 2007

To the Editor:

This valuable retrospective study looks at the complication rate and frequency of re-admission following day case (ambulatory urological surgery), under both local and general anaesthesia. The authors have reviewed all day case surgery over a 16 month period at a single institution accumulating data on 1189 patients from a possible 1420.

The importance of this paper is two fold. Firstly, it highlights the ever increasing trend toward day case surgery throughout the world with an inevitable parallel rise in the degree of surgical complexity that can be accomplished in such a setting. Not too long ago, day case ureteroscopy with stent placement was unheard of, now it is common place with excellent results and acceptable rates of complication and re-admission.

The second important issue is that of re-admission and complications following day case surgery and the distribution of these issues amongst the various procedures with identification of risk factors where possible. It is no surprise that more complex procedures are inextricably linked to a higher rate of both complication and re-admission. One would accept this as the first cousin of change and progress and it is this facet that offers the greatest opportunity for improvement and further progress.

The re-admission figures are very impressive in this series – overall 0.5 %. This compares very favourably with figures from other studies¹ and is well below the recommended re-admission rate of 3% (1). There are minor omissions from this paper, the re admission rate following GA day case procedures,

whilst having a risk ratio in excess of 7 in comparison to the rate following local anaesthesia is not calculated. It would also have been of use to include the actual re-admission rates for each procedure classification. In our own multi-centre study (2), ureteroscopy yielded a re-admission rate of over 13% which may be loosely compared to the 18% complication rate following ureteroscopy in this series despite an unknown rate of re-admission.

There is no doubt that there is a huge drive, both from a patient acceptability view and from a health economic stand, for day case surgery to

continually evolve. As it does so, there is a vital need for perpetual audit and analysis of results to ensure that patient interests are not overlooked or indeed sacrificed in the name of such progress.

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Dr. Ian Pearce

*Consultant Urological Surgeon
Manchester Royal Infirmary
Manchester, United Kingdom
E-mail: pearcey@totalise.co.uk*

Re: The Role of Squamous Differentiation in Patients with Transitional Cell Carcinoma of the Bladder Treated with Radical Cystectomy

Alberto A. Antunes, Luciano J. Nesrallah, Marcos F. Dall'Oglio, Carlos E. Maluf, Cesar Camara, Katia R. Leite, Miguel Srougi

Division of Urology, University of Sao Paulo Medical School, Sao Paulo, Brazil and Hospital Sirio Libanes, Sao Paulo, Brazil

Int Braz J Urol, 33: 339-346, 2007

To the Editor:

Antunes et al., provide an interesting insight into the adverse prognostic role of squamous differentiation of transitional cell carcinoma (TCC) of the bladder. In their retrospective study, both disease recurrence and mortality were statistically higher in

those patients with squamous differentiation, with the adverse prognosis being confirmed on a multivariate analysis. Some deficiencies were noted in the study, most importantly the small number of patients, and the lack of information about the presence and extent

of lymph node metastases, which may have affected results. Certainly these results have not been demonstrated by other investigators that have found no statistically significant difference between squamous differentiation and pure TCC, although many have shown mortality reductions with other subtypes such as adenocarcinoma, carcinosarcoma and small cell carcinoma of the bladder (1-3). Nonetheless, it remains crucial that further, preferably randomized or well conducted retrospective studies are performed, to confirm which TCC subtypes truly portend a poorer prognosis. This data could then be used to assist in the integration of chemotherapy or radiotherapy, together with surgery in the management of these aggressive cancers in order to improve clinical outcomes.

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Dr. Mark Frydenberg

Department of Urology

Monash Medical Centre, Monash University

Victoria, Australia

E-mail: frydenberg@optusnet.com.au

Re: The Role of Squamous Differentiation in Patients with Transitional Cell Carcinoma of the Bladder Treated with Radical Cystectomy

Alberto A. Antunes, Luciano J. Nesrallah, Marcos F. Dall'Oglio, Carlos E. Maluf, Cesar Camara, Katia R. Leite, Miguel Srougi

Division of Urology, University of Sao Paulo Medical School, Sao Paulo, Brazil and Hospital Sirio Libanes, Sao Paulo, Brazil

Int Braz J Urol, 33: 339-346, 2007

To the Editor:

Squamous differentiation is well known to occur in the bladder urothelial carcinoma and represents the most common form of mixed differentiation (1-5). When defined by the presence of intercel-

lular bridges and/or keratinization in urothelial carcinoma, it occurs in 21% of urothelial carcinomas of the bladder, and in 44% of tumors of the renal pelvis (2-3). Its frequency increases with grade and stage

(2-3). The diagnosis of squamous cell carcinoma is reserved for pure lesions without any associated urothelial component, including urothelial carcinoma in situ (5). Tumors with any identifiable urothelial element are classified as urothelial carcinoma with squamous differentiation and an estimate of the percentage of squamous component should be provided (3-5).

The clinical significance of squamous differentiation remains uncertain, but seems to be an unfavorable prognostic feature in such patients undergoing radical cystectomy, possibly, because of its association with high-grade tumors (1-5). This is supported by Antunes et al. (1). These authors have conducted an interesting study related to clinical implications of squamous differentiation in urothelial carcinoma treated by radical surgery. In their study, 22% of tumors had squamous differentiation, but most importantly, they observed a higher disease recurrence and mortality in patients having squamous differentiation as compared with patients without squamous differentiation. Antunes et al. (1), also found squamous differentiation as independent predictor of survival in patients with bladder cancer after radical surgery. This study provides nicely performed evidence on the usefulness of reporting the presence of squamous differentiation in urothelial carcinoma. Other studies have emphasized squamous differentiation as predictor of a poor response to radiation therapy, and possibly also to systemic chemotherapy, although the controversy still exists on this issues. To avoid some problems related to the criteria in assessing squamous differentiation, the

use of immunohistochemical technique in addition to appropriated conventional analyses is advised (2). Cytokeratin 14, caveolin, uroplakins and L1 antigen have been reported as immunohistochemical markers of squamous differentiation since they are expressed in urothelial carcinoma and not in squamous differentiation (2). Finally, the main limitation of the study by Antunes et al. (1) is the small number of cases entering the analysis; therefore studies on the issue including larger series might be necessary to confirm the data by Antunes et al.

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Dr. Maria J. Requena
Dr. Antonio Lopez Beltran
Urology Unit (MJR)
Anatomic Pathology Unit (ALB)
Department of Surgery
Cordoba University Medical School
Cordoba, Spain
E-mail: emllobea@uco.es

Re: The Use of Enoxaparin to Prevent Venous Thromboembolism in Patients Undergoing Radical Retropubic Prostatectomy: Feasibility and Utility

Kogenta Nakamura, Ali Kasraeian, Saif Yacoub, John Pendleton, Satoshi Anai, Charles J. Rosser

Division of Urology, University of Florida, Jacksonville, and Department of Urology, University of Florida, Gainesville, Florida, USA

Int Braz J Urol, 33: 347-354, 2007

To the Editor:

It is very interesting to me that the use of an anticoagulant such as heparin is “standard” prophylaxis after an open radical prostatectomy (RP) in much of Western Europe but not in the US. I do not know if it is used in conjunction with a laparoscopic RP but it would seem that there would be little difference.

There is no argument that venous thromboembolism (VTE) is the most important nonsurgical complication following major urologic surgery and this would include RP. The rate of VTE has been steadily declining over the past two decades thanks to improved techniques during surgery and thus less blood loss, i.e. less risk of hypotension, a lower operative time, earlier mobilization, and the use of VTE prophylaxis. Despite these advances, the incidence of symptomatic VTE ranges between 1 and 5%. Pulmonary embolus, although quite uncommon, is the most often cited cause of post RP death (< 1 in 500).

Indeed patients undergoing a RP have known risk factors for a VTE, such as older age, pelvic surgery, node dissection, cancer. Thus the consensus for some method to reduce the risk of a VTE. There are very few recent prospective trials, which compare different methods for VTE prophylaxis in urologic surgery. The three commonly used approaches to VTE prophylaxis are graduated compression stockings (GCS), intermittent pneumatic compression devices (IPCD), and pharmacologic therapy, i.e. one of the heparin products.

An outstanding review of VTE prophylaxis was published in 2004 (1). The recommendation for

urologic surgery and specifically major open procedures such as RP was routine prophylaxis with low dose unfractionated heparin two or three times daily. Acceptable alternatives include IPCD and /or GCS or low molecular weight heparin. Thus, we have a choice. No perfect answer.

What do I do? For the past 15 years our anesthesia team and I have used a protocol which consists of a long acting spinal supplemented by general anesthesia(2). Patients are positioned in the supine flexed position with the kidney rest raised. IPCD are placed when the patient enters the operating room and are maintained during surgery and until the next morning when the patient is out of bed and ambulating. Ninety percent of patients are discharged the day after surgery without additional VTE prophylaxis.

We reported our incidence of VTE in 1,364 consecutive RP in 2005 (3). There were three VTE events (0.21%) in lower (n = 2) or upper (n = 1) extremities. No patient had a clinical pulmonary embolus. The only postoperative death was from a myocardial infarction. Since that publication, there have been no additional clinical VTE.

The use of a spinal anesthetic may be an important component to our low incidence of VTE. Prospective trials have convincingly demonstrated that patients receiving a spinal or epidural anesthetic with or without a concurrent general component have a significantly reduced chance of a VTE (4). The precise mechanism is not clear but less stasis in the lower extremities or lower blood loss may be factors. The long acting spinal actually encourages early

ambulation since the patients have less postoperative pain.

The article by Nakamura et al. asks what to do when patients do not comply with the IPCD. My suggestion would be to emphasize to the nurses and the patient the importance of the device and in addition use a spinal anesthetic. Our patients remove the devices the morning after surgery and begin ambulation.

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Dr. Mark S. Soloway

*Professor & Chair, Department of Urology
Miller School of Medicine, University of Miami
Miami, Florida, USA
E-mail: MSoloway@med.miami.edu*

Re: Inflammatory Atrophy on Prostate Needle Biopsies: Is There Topographic Relationship to Cancer?

Athanase Billis, Leandro L.L.Freitas, Luis A. Magna, Ubirajara Ferreira

*Departments of Anatomic Pathology (AB,LLL), Genetics and Biostatistics (LAM), and Urology (UF),
School of Medicine, State University of Campinas (Unicamp), Campinas, São Paulo, Brazil*

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To the Editor:

The editorial comments of our paper by Dr.H.Samaratunga, Dr. Rodolfo Montironi, and Dr. Liang Cheng were very informative on a lesion that is one of the most frequent mimics of prostatic adenocarcinoma. It occurs most frequently in the posterior lobe or peripheral zone (1-3) and gained im-

portance with the increasing use of needle biopsies for the detection of prostatic carcinoma (4). Moore (1), in 1936, was one of the first authors to describe prostatic atrophy in a systematic autopsy study. He found that there was a strong correlation with age and, according to his study, prostatic atrophy is initi-

ated during the 5th decade and continues as a progressive process into the 8th decade. It is a frequent lesion: 85% in autopsies and 83.7% in needle biopsies (5,6).

Why this lesion mimics adenocarcinoma? Histologically prostatic atrophy may be partial or complete. The latter is subtyped in simple, hyperplastic (or post-atrophic hyperplasia), and sclerotic (5). It seems that the subtypes represent a morphologic continuum of a single lesion (4). Partial atrophy and hyperplastic (or postatrophic hyperplasia) most frequently mimic adenocarcinoma. Hyperplastic atrophy shows small acini closely packed together and lined by atrophic epithelium. Fibrosis is present or not in the stroma. When present, the proliferation is irregular and can result in distortion of the acini simulating stromal infiltration (Figure-1). Partial atrophy was described by Oppenheimer et al. (7). The name is due to the fact that there is partial preservation of the cytoplasm simulating neoplastic micro-acini (Figure-2). An additional pitfall for the surgical pathologist is the fact that in partial atrophy the basal cells may be scattered and in some acini may be completely absent (Figure-3).

There are some findings associated to the etiopathogenesis of the lesion. Atrophy is clearly associated to advanced age (1,5). Radiotherapy and hormonal deprivation are associated with diffuse atro-

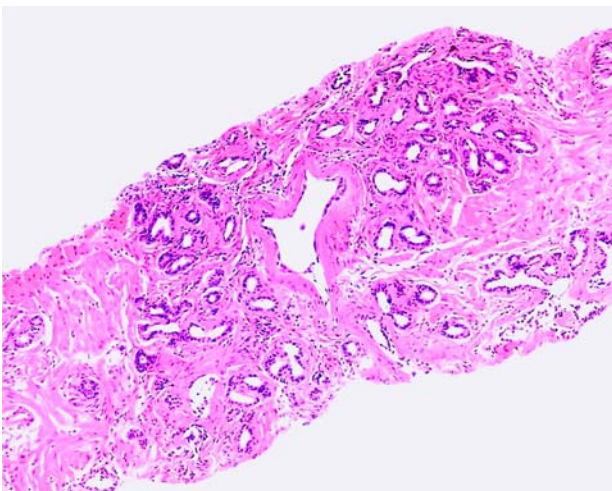


Figure 1 – Hyperplastic atrophy (or postatrophic hyperplasia).

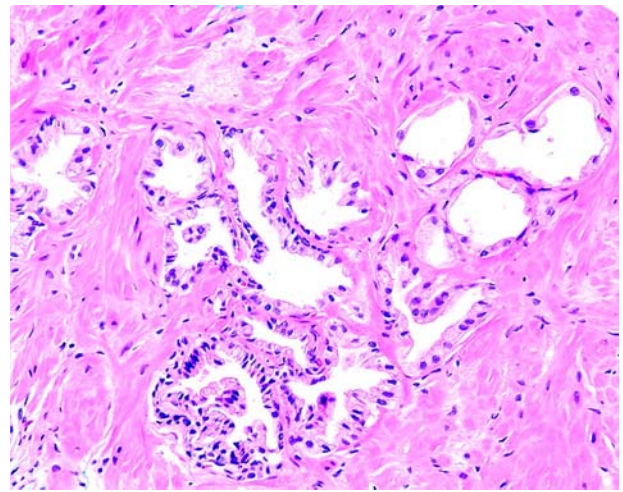


Figure 2 – Partial atrophy.

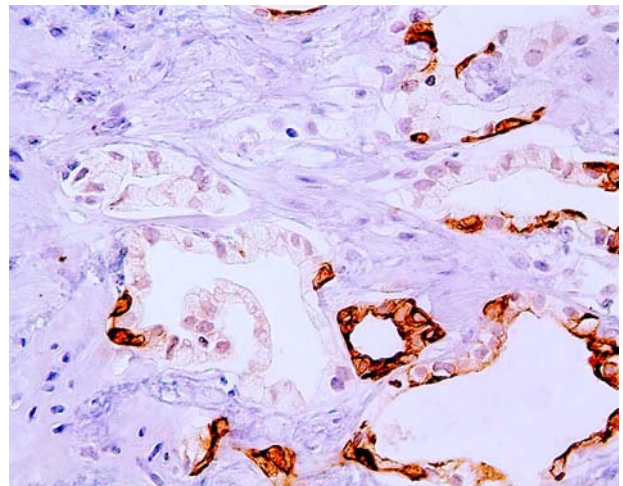


Figure 3 – Partial atrophy (immunohistochemistry: 34âE12).

phy. Inactive or active inflammation is a frequent cause for the lesion (8) and based on a study on autopsies there is evidence that chronic local ischemia may also be a cause of atrophy (5). However, many examples of atrophy are still considered idiopathic in nature. Both inflammation and ischemia are associated with focal forms of atrophy.

The relation of prostatic atrophy to neoplasia is exciting and controversial. This topic was thoroughly commented in our study and discussed in the editorial comments by Dr.H.Samaratunga, Dr. Rodolfo Montironi, and Dr. Liang Cheng (6).

In diagnostic practice it is not rare to find patients with serum prostate-specific antigen (PSA) elevation and several biopsies showing no atypical, preneoplastic or neoplastic lesions, except prostatic atrophy. Regardless of the cause, we hypothesized that damaged epithelial cells in atrophic acini could be a source of the elevation of PSA. Our study was based on 131 needle prostatic biopsies corresponding to 107 patients. The only diagnosis in all biopsies was focal prostatic atrophy without the presence of cancer, high-grade prostatic intraepithelial neoplasia, or areas suspicious for cancer. A positive and significant association was found between the extent of atrophy and the total or free serum PSA elevation (9). All patients showing 35mm or higher linear extent of atrophy in the biopsy cores, had serum PSA above 4ng/mL. The findings suggest that damaged epithelial cells in atrophic acini, regardless of cause, could be a source of serum PSA elevation.

Prostate-specific antigen is a single chain glycoprotein with proteolytic enzyme activity mainly directed against the major gel-forming protein of the ejaculate (semenogelin). PSA induces liquefaction of semen with release of progressively motile spermatozoa (10). There are several efficient physiologic barriers to prevent the escape of any significant amounts of PSA from the prostatic ductal system: basement membrane of the acini, basal cells lining the acini, prostatic stroma, basement membrane of capillary endothelial cells, and endothelial cells. These barriers normally prevent PSA from entering the general circulation at concentrations of more than 3ng/mL (10).

Focal prostatic atrophy represents a form of adaptive response to injury most commonly to inflammation and/or local ischemia. It is intriguing that atrophic acini may produce an excess of serum PSA. Inflammation and/or ischemia are injurious stimuli resulting in diminished oxidative phosphorylation, membrane damage, influx of intracellular calcium, and accumulation of oxygen-derived free radicals (oxidative stress) (11). We speculate that these injurious stimuli may interfere in the physiologic barrier that prevent the escape of any significant amounts of PSA to the general circulation.

Atrophy is a frequent, exciting, intriguing lesion and a relevant subject for further research. Pa-

thologists should include the presence and extent of the lesion in the pathology report.

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Dr. Athanase Billis

*Full-Professor of Pathology
State University of Campinas, Unicamp
Campinas, São Paulo, Brazil
E-mail: athanase@fcm.unicamp.br*

Re: Lower Urinary Tract Dysfunction in Children. What Do Pre-School Teachers Know About It?

Patricia Lordelo, Fabio Maron, Daniela G. Barros, Danilo V. Barroso, Jose Bessa Jr, Ubirajara Barroso Jr

Department of Pediatric Urology, School of Medicine, Federal University of Bahia, Salvador, Bahia, Brazil

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To the Editor:

The authors devised a questionnaire that they administered to 50 pre-school teachers “to evaluate the basic knowledge of lower urinary tract dysfunction”. Teachers of young children can have a significant impact in detecting children who may need urologic care. In addition, they may be, in part, responsible for reinforcing the voiding habits of these children, for better or for worse. Pre-school teachers in this study appeared to have mixed notions about what should be considered as normal and abnormal voiding behavior. It should not be surprising that there was little difference in responses based on the education or experience of the teachers, as this is generally not part of the formal training or continuing education of teachers.

The age range of children taught by these teachers may also serve to explain the discrepancies among the teacher’s perceptions of what is normal.

Frequency in a 4-year-old child whose voiding habits are still immature probably warrants less attention than a 7-year-old with frequency. Such nuances in the development of urinary control only serve to reinforce the need to educate teachers of young children about proper voiding habits, as the authors have advocated.

Behavioral therapy can reduce both urinary tract infections and urinary incontinence in a significant number of children. Because children spend a good proportion of their waking hours at school, teachers can have a significant impact on this health issue by reinforcing proper voiding habits and alerting parents and healthcare professionals to those children at risk for clinically significant underlying urologic disease. Further studies demonstrating the effectiveness of educational programs for teachers are needed.

Dr. M. Chad Wallis
Assistant Professor of Surgery
Division of Urology
University of Utah School of Medicine
Salt Lake City, Utah, USA
E-mail: chad.wallis@hsc.utah.edu