Conclusions: The majority of prostates from cystoprostatectomies had no involvement of the prostatic apex by Uca or clinically significant Pca. Hence, most patients may be candidates for prostate apical sparing. However, involvement of the apex by Uca in any patient raises concern about procedures that leave portions of the prostate urethra after cystectomy in an effort to improve continence. In candidates for orthotopic neobladder reconstruction removing all of the prostatic urethra and sparing the remainder of the prostatic apex may allow improved preservation of urinary continence with an acceptable low risk of clinical Pca progression. Whether future strategies for preoperative exclusion of apical Pca and intraoperative assessment of more proximal prostate to help exclude apical urothelial disease may identify patients suitable for prostatic apical sparing remains to be determined. The impact on functional outcomes and cancer control also require additional study.

Editorial Comment

In older textbooks the preservation of the prostatic apex during cystoprostatectomies for transitional cancer of the bladder was regarded a standard technique. In order to improve nerve preservation and subsequently potency and furthermore to enable postoperative of fertility preservation not only of the prostatic apex but of half of the prostate was suggested by some authors. It is of note that the areas which are than preserved are the ones where the majority of prostatic tumors arise.

In the current study 41% of 121 patients undergoing cystoprostatectomy for transitional cell cancer had unsuspected prostate cancer. Half of them were clinically significant. In 60% of the unsuspected prostate cancers and in 33% of the transitional cell cancer invading the prostate the prostatic apex was involved. Overall tumor was found unsuspectedly in the prostatic apex in 40% (39/121 patients).

This is actually a very high rate of unsuspected tumor in the prostate and a substantial number were significant tumors. With this number in mind it is therefore very difficult to argue for either an apex or even a fertility preserving cystoprostatectomy. Even if the transitional cell cancers invading the prostate are excluded because they might be seen with a better staging of patients there is still the problem of unsuspected prostate cancer which may not be found despite more efforts in preoperative staging. Neither PSA nor imaging will be able to detect them all. Therefore only partial remove of the prostate in patients with transitional cell cancer of the bladder has to be an absolute exception and patients and surgeons must be aware of the substantial risk of later problems with a secondary prostate cancer.

Dr. Arnulf Stenzl
Professor and Chairman of Urology
Eberhard-Karls-University Tuebingen
Tuebingen, Germany

UROLOGICAL ONCOLOGY

Is there a role for surgery in the management of metastatic urothelial cancer? The M. D. Anderson experience

Siefker-Radtke AO, Walsh GL, Pisters LL, Shen Y, Swanson DA, Logothetis CJ, Millikan RE
Center for Genitourinary Oncology and Department of Medical Oncology, The University of Texas M. D. Anderson Cancer Center, Houston, 77030-4009, USA
J Urol. 2004; 171: 145-8

Purpose: Although rarely curative, chemotherapy remains the mainstay of treatment for metastatic urothelial cancer. The role of surgery for metastatic disease is not well established for urothelial cancer, but is sometimes undertaken in the face of persistent or recurrent disease that can be surgically resected.

Materials and Methods: We identified 31 patients with metastatic urothelial cancer undergoing metastasectomy with the intent of rendering them free of disease. All gross disease was completely resected in 30 patients (97%). The most frequently resected location was lung in 24 cases (77%), followed by distant lymph nodes in 4 (13%), brain in 2 (7%) and a subcutaneous metastasis in 1 (3%).

Results: Median survival from diagnosis of metastases and from time of metastasectomy was 31 and 23 months, respectively. The 5-year survival from metastasectomy was 33%. Median time to progression following metastasectomy was 7 months. Five patients were alive and free of disease for more than 3 years after metastasectomy.

Conclusions: The results in this highly selected cohort, with 33% alive at 5 years after metastasectomy, suggest that resection of metastatic disease is feasible and may contribute to long-term disease control especially when integrated with chemotherapy. Further prospective studies should be undertaken to better characterize the selection criteria and benefit from this intervention.

Editorial Comment

These data look good on first sight, but it must be emphasized that patient selection is extraordinary and that only patients with an extremely good Karnowski Index can undergo excessive surgery for metastatic disease. After all, median time to progression following metastasectomy was only 7 months. Only 3 patients had no recurrence at last follow-up, of whom 2 have been disease-free for more than 5 years. If one looks closer into the data, these 2 disease-free patients might be those patients in whom necrotic tumor without viable cancer had been resected. Thus, the result might rather be contributed to chemotherapy.

In conclusion, surgery does not play a major role in the management of metastatic urothelial cancer and should be reserved for highly selected patients only.

Dr. Andreas Böhle
Professor of Urology
HELIOS Agnes Karll Hospital
Bad Schwartau, Germany

Extended radical lymphadenectomy in patients with urothelial bladder cancer: results of a prospective multicenter study

Leissner J, Ghoneim MA, Abol-Enein H, Thuroff JW, Franzaring L, Fisch M, Schulze H, Managadze G, Allhoff EP, el-Baz MA, Kastendieck H, Buhtz P, Kropf S, Hohenfellner R, Wolf HK
Department of Urology, Otto-von-Guericke-University, Magdeburg, Germany
J Urol. 2004; 171: 139-44

Purpose: Previous studies demonstrate a positive correlation between postoperative survival and the extent of pelvic lymphadenectomies in patients with bladder cancer. However, the distribution of nodal metastases has not been examined in sufficient detail. Therefore, we conducted a comprehensive prospective analysis of lymph node metastases to obtain precise knowledge about the pattern of lymphatic tumor spread.

Materials and Methods: Between 1999 and 2002, we performed 290 radical cystectomies and extended lymphadenectomies. Cranial border of the lymphadenectomy was the level of the inferior mesenteric artery, lateral border was the genitofemoral nerve and caudal border was the pelvic floor. We made every effort to excise and examine microscopically all lymph nodes from 12 well-defined anatomical locations.

Results: Mean total number and standard deviation of lymph nodes removed was 43.1 +/- 16.1. Nodal metastases were present in 27.9% of patients. The percentage of metastases at different sites ranged from

14.1% (right obturator nodes) to 2.9% (right paracaval nodes above the aortic bifurcation). By studying cases of unilateral primary tumors or with only 1 metastasis we observed a preferred pattern of metastatic spread. However, there were many exceptions to the rule and we did not identify a well-defined sentinel lymph node.

Conclusions: We strongly recommend extended radical lymphadenectomy to all patients undergoing radical cystectomy for bladder cancer to remove all metastatic tumor deposits completely. The operation can be conducted in routine clinical practice and our data may serve as a guideline for future standardization and quality control of the procedure.

Editorial Comment

These authors performed a meticulous lymphadenectomy together with cystectomy in patients with bladder cancer. In analogy to previous approaches in retroperitoneal lymphadenectomy for testis cancer, the lymph nodes were sampled and ordered according to there anatomic origin.

In general, these data provide interesting information on the rate and the extent of lymphonodular metastases in bladder cancer. Several issues however deserve comments. First, patients with pT1 category (n = 57) only had 1.8 % metastases, whereas pT2a patients had 10.7% and pT2b had 22.2% metastases. All other pT – categories had around 40 %, whereas pT4b had 80 % metastases. The percentage of lymph node metastases on all 290 patients was around 3 – 8 % over all anatomical sides, with the exception of the ipsilateral and contralateral paravesical area (14% and 11%). If patients had nodal metastases at level 1 (next to the bladder) 57% of patients of group were also positive at level 2 and 31 % at level 3. In conclusion nodal metastases next to the bladder indicate systemic disease. To my opinion, these data would rather provide the rationale for systemic chemotherapy in nodular positive patients.

Dr. Andreas Böhle
Professor of Urology
HELIOS Agnes Karll Hospital
Bad Schwartau, Germany

The incidence of prostate cancer in men with prostate specific antigen greater than 4.0 ng/ml: a randomized study of 6 versus 12 core transperineal prostate biopsy

Emiliozzi P, Scarpone P, DePaula F, Pizzo M, Federico G, Pansadoro A, Martini M, Pansadoro V
San Giovanni Hospital and Vincenzo Pansadoro Foundation, Rome, Italy
J Urol. 2004; 171: 197-9

Purpose: The prostate cancer detection rate in patients with elevated prostate specific antigen (PSA) increases with extended needle biopsy protocols. Transperineal biopsy under transrectal ultrasound guidance is rarely reported, although notable cancer diagnoses are obtained with this technique. We describe the results of 6 and 12 core transperineal biopsy.

Materials and Methods: A total of 214 patients with PSA greater than 4.0 ng/ml were prospectively randomized to undergo 6 or 12 core transperineal biopsy. Each group of 107 patients was comparable in terms of clinical characteristics. The procedure was performed on an outpatient basis using local anesthesia. Specimens were obtained with a fan technique with 2 puncture sites slightly above the rectum (1 per lobe) under transrectal ultrasound guidance. Cores were taken from all peripheral areas, including the far lateral aspect of the prostate.

Results: The overall cancer detection rate was 38% and 51% for 6 and 12 core biopsy, respectively. In patients with PSA between 4.1 and 10 ng/ml the cancer detection rate was 30% and 49% for 6 and 12 core biopsy, respectively.

Conclusions: The 12 core transperineal prostate biopsy is superior to 6 core biopsy. The technique provides optimal prostate cancer diagnosis. About half of the patients with PSA greater than 4.0 ng/ml and a slightly lower percent with PSA between 4.1 and 10 ng/ml have prostate cancer.

Editorial Comment

The rationale for performing 12 core biopsies in patients with prostate carcinoma is rarely given as clear as it is in the data presented with this paper.

Moreover, these data provide an impressive insight into true (?) the incidence of prostate carcinoma in a population with elevated PSA. Overall cancer detection rate was 38% and 51 % for 6 and 12 core biopsies, respectively. In patients with PSA between 4 and 10 ng/ml, the cancer detection rate was 30% and 49% for 6 and 12 core biopsies, respectively. The positive DRE rate in both groups was around 25 %. The authors conclusion is, 6 core prostate biopsy techniques should be considered outdated, and, about 50% of patients with increased PSA have prostate cancer. These two sentences deserve no further emphasis.

Dr. Andreas Böhle
Professor of Urology
HELIOS Agnes Karll Hospital
Bad Schwartau, Germany

FEMALE UROLOGY

The tensile properties of tension-free vaginal tape and cadaveric fascia lata in an in vivo rat model

Spiess PE, Rabah D, Herrera C, Singh G, Moore R, Corcos J
Department of Urology, McGill University, Montreal, Canada
BJU Int. 2004;93: 171-3

Objective: To examine the tensile properties (break load and maximum average load), after in vivo implantation in a rat animal model, of tension-free vaginal tape (TVT) and cadaveric fascia lata (CFL), as pubovaginal slings of these materials have become popular for treating stress urinary incontinence.

Materials and Methods: Twenty Sprague-Dawley rats (300-400 g) had 1 x 2 cm strips of commercially available TVT and CFL implanted on the right and left anterior abdominal wall, respectively. Half of the animals were then killed at 6 weeks and the remainder at 12 weeks, after which the strips of TVT and CFL were removed and their tensile properties measured using a tensiometer. The tensile strength of TVT and CFL strips maintained only in normal saline served as controls.

Results: The TVT strips had a mean break load of 0.740 kg in the control and only 0.390 kg for CFL ($P < 0.05$). At 6 weeks the TVT material had a mean (sd) maximum average load of 0.634 (0.096) kg and a mean break load of 0.589 (0.249) kg, whereas the respective values for the CFL were 0.323 (0.198) and 0.167 (0.063) kg ($P < 0.05$). Similarly at 12 weeks, TVT had a greater mean maximum average and break load than CFL, at 0.742 (0.052) and 0.274 (0.126), and 0.737 (0.056) and 0.185 (0.128) kg, respectively.

Conclusion: This is the first study to assess the tensile properties of the currently used sling materials, TVT and CFL, in an in vivo model. TVT has a greater break load and maximum average load than CFL; the tensile strength of these materials does not decrease with time.