1-

**Postrenal transplantation urethral Kock pouch**

We report on a man with schistosomal bladder who developed stage T3N0M0, grade II transitional cell carcinoma of the bladder 9 years following successful renal transplantation. Radical cystoprostatectomy was performed and urethral Kock pouch was implanted in the same setting. The patient was continent and the graft function was maintained without reflux or obstruction at a follow-up period of 2 years. No complications due to poor intestinal healing or intraabdominal sepsis were observed despite immunosuppression and electrolyte disorders were minor.

2-

**Recoverability of renal function after relief of chronic partial unilateral ureteral obstruction: Study of the effect angiotensin receptor blocker (Losartan)**

Recoverability of renal function after relief of chronic partial unilateral ureteral obstruction: Study of the effect angiotensin receptor blocker (Losartan)

3-

**Bladder carcinoma among live-donor renal transplant recipients: a single-centre experience and a review of the literature.**

To present our experience with bladder cancer among a renal transplant population and to review critically the relevant literature. PATIENTS AND METHODS: In all, 1865 renal graft recipients were followed for a mean (SD) of 6.5 (5) years. Seven recipients (all men) developed a urothelial bladder tumour. The stage and grade of the tumours were determined. The method of the treatment was selected on the basis of the tumour characteristics and graft function. Patients were regularly followed; the endpoints were cancer-specific survival, recurrence or metastasis. RESULTS: All patients presented with gross haematuria. There was non-muscle-invasive disease in two patients who were treated by transurethral resection and adjuvant intravesical bacille Calmette-Guérin immunotherapy. One patient died 24 months later due to complications of end-stage renal disease. To date the second patient is alive and free of the recurrence. Five recipients with muscle-invasive disease had a radical cystectomy and orthotopic bladder substitution. The mean (sd) time to the last follow-up or death was 14.6 (3.1) months. Three patients died with stable graft function; two from distant metastasis and one from a cerebrovascular stroke. The remaining two patients are still alive, free of disease and with good graft function. CONCLUSIONS: Urothelial bladder tumours are generally uncommon. The presence of haematuria in renal allograft recipients should be thoroughly investigated. Early diagnosis and prompt treatment are required for managing such tumours, because they are aggressive. Orthotopic bladder substitution is feasible with a good functional outcome for patients in whom cystectomy is indicated.

4-

**Leiomyoma of the Bladder causing urethral and unilateral ureteral obstruction.**


We report a case of a vesical leiomyoma that obstructed not only the ureter but also the urethra. This entity is rare and to our knowledge it has not been described previously in the urological or gynecological literature.

5-

Experimental evaluation of uretero-ileal reimplantation was carried out in 10 adult mongrel dogs. One half of the ureters (10) were implanted into ileal reservoirs using the classic Le Duc technique. In the other half, the implanted ureters were covered by ileal mucous membrane. Following the classic Le Duc technique, 40% of the reimplemented ureters showed evidence of either reflux and/or stenosis resulting from shortening and fibrosis of the tunnel. The remaining 60% were perfect due to spontaneous nipple formation at the implantation sites rather than to creeping of the intestinal mucosa. In contrast, none of the ureters examined was either refluxing or stenotic. This study outlines the critical importance of covering the implanted ureters with mucosa to avoid the ureteric adventitia being exposed to the irritative effects of urine with subsequent scarring.


The influence of exposure to urine on the ureteric adventitia and the ileal mucous membrane was studied in 10 mongrel dogs. When the ureter was implanted freely into the lumen of the bladder its adventitia became the seat of granulation tissue formation. This is later covered by creeping of transitional epithelium lining the ureter, forming what is in effect a ureteral nipple. Final healing is associated with an unpredictable amount of scarring. Furthermore, it was noted that healing and creeping of the ileal mucous membrane are impeded in the presence of urine. The sum of these effects is that ureters implanted in an open sulcus of the small intestine are not covered by intestinal epithelium, they tend to form spontaneous nipples and their healing is associated with either stenosis or reflux in some 30% of cases.
new antireflux uretero-ileal reimplantation technique suitable for use with bladder substitutes is presented. This procedure entails creation of a serous-lined extramural tunnel. Following detubularization of the bowel segment, the adjacent flaps are approximated by continuous 4/0 non-absorbable sutures 1.5 cm from the cut edges. The ureters are laid in the trough thus fashioned. ‘Button-holes’ are created in the bowel flaps and a mucosa-to-mucosa uretero-ileal anastomosis is carried out. The mucosal edges of the flaps are then approximated by one layer of continuous 4/0 (PGA) suture resulting in closure of this artificial tunnel. The feasibility and functional outcome of this technique were experimentally investigated in 8 dogs. Follow-up was carried out up to 30 weeks. Assessment by intravenous urography and ascending studies showed that the procedure is an efficient method of providing an unobstructed unidirectional flow of urine.

9-


novel technique for an anti-refluxing uretero-ileal reimplantation entailing creation of 2 serous lined extramural tunnels in a detubularized ileal W-bladder is presented. The operation was done on 12 patients in whom an orthotopic bladder substitute was indicated. Mean followup was 18 months. Evidence indicated that this method could provide a nonobstructed unidirectional flow of urine in all of the examined renal units.

10-


A new technique for the construction of a cutaneous continent catheterizable outlet suitable for urinary reservoirs is presented. The technique entails the creation of an ileal reservoir outlet by implantation of a tapered ileal segment into a serous-lined extramural tunnel. The procedure was carried out in eight experimental dogs, and the results were compared with a control group of five dogs for which a nontunnelled tapered ileal outlet draining a similar reservoir was constructed. Clinical, radiological and urodynamic evaluation provided evidence that this new outlet is easily catheterizable. Its continence mechanism is more reliable than that of a simple tapered outlet

11-


PURPOSE: To compare the results of percutaneous and open drainage for perinephric abscess.

MATERIALS AND METHODS: The files of 86 patients who underwent drainage for
perinephric abscesses from April 2001 through March 2008 were evaluated. The method of drainage for each patient was performed according to the clinical decision of the treating physician. Percutaneous tube drain (PCD) was used for drainage of the abscess in 43 patients (group 1), while the other 43 patients were managed with open drainage (group 2). Cure was defined as complete obliteration of the abscess cavity. The cure rates, complications, and hospital stay were compared between both groups.

RESULTS: The study included 50 males and 36 females with mean age 44.2 ± 17.3. The most common predisposing factors were diabetes mellitus and/or stones. Open drainage of perinephric abscesses resulted in a statistically significant higher cure rate (98% versus 69%, p < 0.001) and shorter hospital stay than PCD (3.6 versus 6 days, p < 0.001). Failure of complete drainage of multilocular abscess was observed in 8 of 13 cases (61.5%) in group 1 and one of 38 cases (2.6%) in group 2 (P < 0.001). Complications were observed in 7% of group 1 and 11.5% in group 2 (P = 0.45). After mean follow-up of 19 months, 9 of 46 patients (19.6%) had recurrence; 7 of them were in group 1.

CONCLUSION: Percutaneous drainage of perinephric abscess is an effective minimally invasive treatment. However, PCD is not the optimal method for drainage of multilocular abscess because open surgical drainage provided higher cure rates and shorter hospitalization than PCD.

PMID: 20202232 [PubMed - in process]

12-


PURPOSE: To compare the results of percutaneous and open drainage for perinephric abscess.

MATERIALS AND METHODS: The files of 86 patients who underwent drainage for perinephric abscesses from April 2001 through March 2008 were evaluated. The method of drainage for each patient was performed according to the clinical decision of the treating physician. Percutaneous tube drain (PCD) was used for drainage of the abscess in 43 patients (group 1), while the other 43 patients were managed with open drainage (group 2). Cure was defined as complete obliteration of the abscess cavity. The cure rates, complications, and hospital stay were compared between both groups.

RESULTS: The study included 50 males and 36 females with mean age 44.2 ± 17.3. The most common predisposing factors were diabetes mellitus and/or stones. Open drainage of perinephric abscesses resulted in a statistically significant higher cure rate (98% versus 69%, p < 0.001) and shorter hospital stay than PCD (3.6 versus 6 days, p < 0.001). Failure of complete drainage of multilocular abscess was observed in 8 of 13 cases (61.5%) in group 1 and one of 38 cases (2.6%) in group 2 (P < 0.001). Complications were observed in 7% of group 1 and 11.5% in group 2 (P = 0.45). After mean follow-up of 19 months, 9 of 46 patients (19.6%) had recurrence; 7 of them were in group 1.

CONCLUSION: Percutaneous drainage of perinephric abscess is an effective minimally invasive treatment. However, PCD is not the optimal method for drainage of multilocular abscess because open surgical drainage provided higher cure rates and shorter hospitalization than PCD.
Recoverability of Renal Function After Relief of Chronic Partial Unilateral Ureteral Obstruction: Study of the Effect of Angiotensin Receptor Blocker (Losartan).
Soliman S., Shokeir A, Mosbah A, Abol-Enein H, Barakat N, Abou-Bieh E, Wafa E. Urology. 2

OBJECTIVES: To evaluate the effect of angiotensin receptor blocker (losartan) on renal function during and after relief of partial unilateral ureteral obstruction (PUO).

METHODS: A total of 32 male mongrel dogs were classified into 3 groups: sham (8), control (12; left PUO + no medications), and study (12; left PUO + losartan). Dogs of the study and control groups were subjected to 4 weeks of PUO. After that, they were reopened and subjected to Lich-Grigoir ureterovesical reimplantation and then were killed by the end of 32 weeks after relief of obstruction after being evaluated at basal condition; fourth week of obstruction; and at 4, 8, and 32 weeks after relief of obstruction by measurement of selective creatinine clearance (CCr), selective renographic clearance (RC), and renal resistive index. Sham group underwent sham surgery at 4 and 32 weeks and evaluated as the other 2 groups.

RESULTS: Sham surgery showed no significant effect on any of the evaluated parameters. Compared with the control, losartan saved reduction in CCr by 11% and RC by 20% of the basal value by the end of the fourth week of obstruction, respectively. Moreover, compared with the control, losartan enhanced regain of CCr by 26% and RC by 26% also of the basal value at 32 weeks after relief of fourth week obstruction, respectively. In addition, the increase in renal resistive index was significantly less in the losartan group.

CONCLUSION: Losartan decreases the deterioration of renal function in PUO and enhances recoverability of renal function after relief of obstruction.


Metabolic acidosis can occur as a result of either the accumulation of endogenous acids or loss of bicarbonate from the gastrointestinal tract or the kidney, which represent common causes of metabolic acidosis. The appropriate treatment of acute metabolic acidosis has been very controversial. Ionized alkaline water was not evaluated in such groups of patients in spite of its safety and reported benefits. So, we aimed to assess its efficacy in the management of metabolic acidosis in animal models. Two models of metabolic acidosis were created in dogs and rats. The first model of renal failure was induced by ligation of both ureters; and the second model was induced by urinary diversion to gut (gastrointestinal bicarbonate loss model). Both models were subjected to ionized alkaline water (orally and by hemodialysis). Dogs with renal failure were assigned to two groups according to the type of dialysate utilized during hemodialysis sessions, the first was utilizing alkaline water and the second was utilizing conventional water. Another two groups of animals with urinary diversion were arranged to receive oral alkaline water and tap water. In renal failure animal models, acid-base parameters improved significantly after hemodialysis with ionized alkaline water compared with the conventional water treated with reverse osmosis (RO). Similar results were observed in
urinary diversion models as there was significant improvement of both the partial pressure of carbon dioxide and serum bicarbonate (P = 0.007 and 0.001 respectively) after utilizing alkaline water orally. Alkaline ionized water can be considered as a major safe strategy in the management of metabolic acidosis secondary to renal failure or dialysis or urinary diversion. Human studies are indicated in the near future to confirm this issue in humans.

15-

**Prediction of Survival After Radical Cystectomy for Invasive Bladder Carcinoma: Risk Group Stratification, Nomograms or Artificial Neural Networks?**


PURPOSE: We compared 3 predictive models for survival after radical cystectomy, risk group stratification, nomogram and artificial neural networks, in terms of their accuracy, performance and level of complexity.

MATERIALS AND METHODS: Between 1996 and 2002, 1,133 patients were treated with single stage radical cystectomy as monotherapy for invasive bladder cancer. A randomly selected 776 cases (70%) were used as a reference series. The remaining 357 cases (test series) were used for external validation. Survival estimates were analyzed using univariate and then multivariate appraisal. The results of multivariate analysis were used for risk group stratification and construction of a nomogram, whereas all studied variables were entered directly into the artificial neural networks.

RESULTS: Overall 5-year disease-free survival was 64.5% with no statistical difference between the reference and test series. Comparisons of the 3 predictive models revealed that artificial neural networks outperformed the other 2 models in terms of the value of the area under the receiver operator characteristic curve, sensitivity and specificity, as well as positive and negative predictive values.

CONCLUSIONS: In this study artificial neural networks outperformed the risk group stratification model and nomogram construction in predicting patient 5-year survival probability, and in terms of sensitivity and specificity.

PMID: 19524972 [PubMed - indexed for MEDLINE]

16-

**Long-term renal morphology and function following entero-cystoplasty (refluxing or antireflux anastomosis): an experimental study.**


OBJECTIVE: To study the morphology and function of the upper urinary tract over the long-term in dogs with an enterocystoplasty and a refluxing or anti-reflux uretero-intestinal anastomosis.

MATERIALS AND METHODS: Subtotal cystectomy and â€cupâ€ ileocystoplasty were performed in 13 dogs. The right ureter was implanted into the cystoplasty with a refluxing technique in seven and with an anti-reflux procedure in six dogs. The left renal unit acted as an intact control in 11 dogs, while in two the intramural part of the left ureter was incised to produce reflux. Thus, of the 26 renal units, nine had a refluxing junction (anastomosis), six were anti-refluxing and 11 served as intact controls. Total and separate glomerular filtration rates (GFRs) were measured preoperatively and regularly
thereafter, and cystometry, urography and ascending enterocystography were performed. At necropsy, urine was obtained for culture from the cystoplasty and renal pelves, and both kidneys were examined histologically.

RESULTS: The cystometric pressure was low in 12 of the 13 dogs: urography showed no obstruction. The fall in separate GFR did not differ significantly among the groups (with and without reflux protection, and control units). Reflux was detected in three of nine renal units with refluxing anastomosis and in three of 11 control units. Bacteriuria was found in the cystoplasty in all dogs; the incidence in the upper urinary tract was seven of eight renal units with a refluxing anastomosis, one in five of those with an anti-refluxing anastomosis and three of nine control units. Pyelonephritis was found in none of the control kidneys, in six of nine kidneys with a refluxing and in two of six with an anti-refluxing anastomosis: it was less severe in the latter.

CONCLUSION: Refluxing ureteric implantation in a low-pressure enterocystoplasty was commonly associated with bacteriuria in the upper urinary tract and with pyelonephritis. Thus, anti-reflux implantation was beneficial for renal preservation in this setting.

PMID: 9014706

17-


The ileoposas tunnel, a new antireflux technique for ureteroileal reimplantation: an experimental

18-


OBJECTIVES: To determine the late complications and consequences for renal function, vitamin and acid-base metabolism after application of the Mainz Pouch I (MZP-I) technique in children and young adults.

PATIENTS AND METHODS: To November 1994, the MZP-I procedure was carried out in 463 patients at our institution, 91 of whom were children and adolescents (< or = 20 years old) using bladder augmentation in 21 and a continent cutaneous stoma in 70. A minimum follow-up of 1 year was possible in 87 patients or 163 renal units (RUs) with a mean of 5.5 years (range 1-10.5).

RESULTS: At the last examination, 23 of 55 (42%) preoperatively dilated RUs had improved. 131 of the 163 RUs (80%) were stable and nine RUs (5.5%) showed a slight clinical asymptomatic increase in the upper tract dilatation. Through an extraperitoneal flank incision, 11% of the RUs which developed stenosis at the ureterocolic anastomosis were successfully reimplanted (16% in patients with neurogenic disorders, 17% with preoperative irradiation and 5% in the remaining patients). Two of 32 patients with an intussuscepted and invaginated ileal nipple required re-operation due to incontinence, but none of the patients with an appendiceal stoma were incontinent. Open revision of a stomal stenosis was performed in three and endoscopic treatment in nine patients. In 54 patients, the levels of vitamins A, B1, B2, B6, E, folic and bile acid were within normal ranges. There was no significant decrease in vitamin B12 levels after operation. In none
of the patients with normal pre-operative creatinine values had the levels increased and none developed severe acidosis or bowel neoplasm.

CONCLUSION: The MZP-I is recommended as a technique for bladder augmentation or continent urinary diversion in children and young adults, with an acceptable complication rate which offers long-term protection of the upper urinary tract.

19-


OBJECTIVE: To determine the rate of radioactive chloride absorption at various times after surgery in patients with a continent ileocaecal reservoir (Mainz pouch I).

PATIENTS AND METHODS: The study was conducted on 20 patients (15 males and five females, mean age 47 years, range 15-72) who had undergone a Mainz pouch I urinary diversion. The patients were divided into three groups according to the duration of the post-operative follow-up, i.e. group 1 for < 6 months (n = 7), group 2 for 6-12 months (n = 8) and group 3 for > 12 months (n = 5). Radioactive 38Cl (20 MBq) was instilled into the pouch and the radioactivity determined in the blood, pouch and body interstitium every 20 min for 3 h. Samples for arterial blood-gas and acid-base profiles were obtained before and after instillation.

RESULTS: In patients in group 1, 93% of the instilled chloride was absorbed into the circulation, while 51% was absorbed by patients in group 3. The acid-base profile showed no significant changes before and after chloride instillation.

CONCLUSION: The absorption of chloride declines markedly with time after surgery in patients with a Mainz pouch I ileocaecal reservoir.

20-


OBJECTIVE: To evaluate the outcome after the treatment of primary non-urachal vesical adenocarcinoma and to determine the significant prognostic factors.

PATIENTS AND METHODS: The records of 185 patients with vesical adenocarcinoma were reviewed. The pathological evaluation included the determination of pathological stage, tumour grade, presence or absence of mucin and its location, evidence of bilharzial infestation and flow-cytometric DNA analysis. The mean follow-up of the treated patients was 3.1 years. Disease-free survival was estimated and the results correlated with patient and tumour characteristics (univariate analysis). Coxâ€™s proportional hazards analysis was used to determine prognostic factors.

RESULTS: The overall 5-year disease-free survival was 55%; only three factors had a significant impact on survival, the tumour pathological stage and grade, and lymph node involvement.

CONCLUSIONS: Radical cystectomy remains the only satisfactory treatment option for primary vesical adenocarcinoma. Tumour stage, grade and lymph node involvement are the only significant prognostic factors.

PMID: 9722755 [PubMed - indexed for MEDLINE]

21-

OBJECTIVE: To compare the functional results from a prospective randomized trial of two different reflux-prevention techniques for ileal bladder substitution.

PATIENTS AND METHODS: In all, 60 patients with invasive bladder cancer were randomized to receive either a serous-lined extramural tunnel (group 1) or T-limb ileal procedure (group 2) as an antireflux technique for the ileal substitute. The preoperative evaluation included intravenous urography, radioisotope renography to evaluate glomerular filtration rates (GFRs) and renal cortical imaging with 99mTc-dimercaptosuccinic acid to assess parenchymal scarring. Evaluable patients were reassessed by the same imaging, and by ascending studies.

RESULTS: The follow-up included 27 patients (49 units) in group 1 and 23 (45 units) in group 2, with a mean (sd) follow-up of 6.3 (0.5) and 7.4 (1.9), respectively. Uretero-ileal strictures were diagnosed in one renal unit in each group (P = 0.5). Ascending studies showed no reflux in any patients in group 1, while 13 renal units (29%) in group 2 were refluxing (P < 0.01). There was progressive cortical scarring with or without significant reduction in GFR (>25%) in three and four renal units in groups 1 and 2, respectively. Among the 13 refluxing units in group 2, three showed a significant deterioration in GFR and one renal unit was diagnosed with progressive cortical scarring.

CONCLUSION: Both procedures provided a low rate of anastomotic stricture, with acceptable preservation of renal function. The serous-lined extramural tunnel provided a more effective antireflux mechanism.

22-


Treatment results were analysed for 27 patients (mean age 53 +/- 7 years) after orthotopic urinary diversion (by the method of Studer, Hautmann) following radical cystectomy. Radical cystectomy was performed without nerve preservation in all the patients. Overcontinence was detected in 4 (26.6%) of 15 patients who had undergone urinary diversion by a conventional method. At the average, residual urine was 220 ml. The modified operation for prevention of urine retention was made in 12 subsequent cystectomies. Neobladder topography was studied with MR imaging (MRI) of the pelvic organs and videoroentgenoreservoirscopy, urodynamic examination was combined with electromyography of the pelvic base muscles. MRI has found that in patients without retention the reservoir was above linea pubbo-coccigeus both at rest and voiding. In patients with overcontinence at rest topographic details by MRI did not differ from those in patients without retention but in stress reservoir changed position. The modification proposed allows one to avoid change in reservoir position and to prevent formation of acute urethra-reservoir angle. Thus, the cause of retention (overcontinence) of the continent orthotopic intestinal neobladder is eliminated.

23-

This article reviews the literature regarding the possible correlation between infection and occurrence of bladder cancer. The PubMed literature database was searched from inception to January 2008. Keywords of bladder, cancer, parasitic, bacterial, viral and infection, were used. Forty studies were included in the review. Several investigators support the idea that schistosomiasis is aetiologically related to the development of bladder cancer in individuals infected with Schistosoma haematobium. Approximately 70% of those with chronic schistosomiasis who have bladder cancer develop squamous cell rather than transitional cell carcinoma. Several investigators suggest that bacteria may play a role in inducing bladder cancer. Clinically, researchers have linked the development of infection, urinary stones and indwelling catheters with bladder cancer. Nevertheless, to date, no prospective study has examined the association between urinary tract infection and bladder cancer risk. The possibility that infection by human papilloma virus (HPV) is a risk factor contributing to bladder cancer has been investigated but no definite conclusions have been drawn. Thus, the debate remains open as to whether there is any direct link between chronic HPV infection and bladder cancer. Only 15 cases of vesical carcinoma have been reported, to date, in the setting of human immunodeficiency virus (HIV). The rare occurrence of bladder cancer during HIV infection and the lack of correlation with the laboratory markers of HIV disease progression may suggest a trivial association between two unrelated disorders. BK virus is oncogenic in newborn hamsters and can transfer to mammalian cells in vitro, but there is little consistent evidence of a link with human bladder cancer. Studies showed no correlation between herpes simplex virus (HSV) and bladder cancer, but bladder cancer becomes infected with HSV much more easily than non-neoplastic urothelium. In conclusion, with the exception of chronic infection with S. haematobium, the association between the occurrence of bladder cancer and chronic bacterial or viral infections could not be confirmed. Prospective studies with large numbers of patients and controls are required to confirm this issue.


PURPOSE: We report the functional results following the use of serous lined extramural valve as an antireflux technique and urinary outlet for continent urinary diversion.

MATERIALS AND METHODS: The procedure was performed in 18 men and 5 women. The technique entails fashioning 2 serous lined extramural troughs in a detubularized W-shape ileal reservoir. A tapered ileal segment is embedded in 1 trough as an antireflux valve and the ureters are anastomosed to its proximal end. Another tapered ileal segment or the appendix is embedded in the second trough and acts as a continent cutaneous outlet.

RESULTS: No operative or postoperative mortality was observed. One patient had prolonged ileus which was treated conservatively. All patients were evaluable with a mean followup of 19 months. All patients but 1 were continent day and night. No catheterization difficulties were reported. Evacuation intervals were 4 to 5 hours. Radiographic evaluation demonstrated a continent compliant reservoir, stable and straight outlet, and absence of pouch and ureteral reflux.

CONCLUSIONS: This procedure is technically feasible, surgically versatile, applicable
for urinary diversion or conversion and associated with satisfactory outcome.

<table>
<thead>
<tr>
<th>25-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of muscle-invasive bladder cancer: an update</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>26-</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACKGROUND: The initial experience of constructing a new antirefluxing valve at the uretero-ileal junction with ileal substitution is reported.</td>
</tr>
<tr>
<td>METHODS: A new antirefluxing valve was constructed at the uretero-ileal junction with ileal substitution by fixing the distal part of the ureter between the psoas muscle and ileal segment (the ileo-psoas tunnel technique).</td>
</tr>
<tr>
<td>DISCUSSION: The valve created by the technique has been working effectively for preventing the ileo-ureteral reflux. Pre-operative hydronephrosis was improved and the renal function has been well preserved.</td>
</tr>
<tr>
<td>CONCLUSION: The ileo-psoas tunnel technique is worthwhile when ileal substitution of the ureter is indicated.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>27-</th>
</tr>
</thead>
<tbody>
<tr>
<td>The development of bladder tumors has been associated with a number of causative agents, including schistosomiasis. Schistosome-related cancers show different clinical and pathological features compared with non-schistosome-related bladder cancers, occurring in younger patients, and being predominantly of squamous cell type. This study addresses the difference between squamous and transitional tumor types in the presence of schistosome infection as a measure of the relationship between tumor genotype and phenotype. We have used comparative genomic hybridization to analyze primary muscle-invasive schistosome-related bladder tumors in 54 patients. Twenty-six of these tumors were squamous cell carcinomas; the remaining 28 were of transitional cell type. On average, transitional cell tumors showed 1.8 times the number of chromosomal aberrations as squamous cell tumors (14.4 versus 8.2, P: &lt; 0.001). For both groups combined, the most prevalent genetic alterations were losses of 8p and 18q, and gains of 8q. Transitional cell cancers also showed frequent losses involving 5q, 9p, 10q, 11p and 11q, and gains at 1q and 17q. Loss of 11p was significantly more frequent in TCC than in SCC tumors (50 versus 4%, P: = 0.01). Squamous cell cancers showed more frequent losses of 17p and 18p than transitional tumors, which was clearly significant given the overall reduced frequency of changes in squamous cancers (P: = 0.001 and P: = 0.03, respectively). These data show that different histologic subgroups of bladder tumors are characterized by distinct patterns of chromosomal alterations. The genetic changes found in the transitional cell group are similar to those reported in non-schistosome-related...</td>
</tr>
</tbody>
</table>
transitional cell tumors, but differ from tumors exhibiting squamous differentiation

28-


PURPOSE: To introduce new technique for covering neourethra with dorsal dartos subcutaneous tissue in Snodgrass hypospadias repair.
MATERIAL AND METHODS: The study included 26 patients with primary hypospadias, aged 2-22 years (average 7.86), operated from June 2002 to August 2006. Of the patients, 21 had distal, 3 midshaft and 2 penoscrotal hypospadias. The standard technique of tubularized incised plate (TIP) with double-layer covering of the neourethra by subcutaneous tissue was used in all cases of reconstruction. The mean follow-up period was 4.5 months (range 3-12 months).
RESULTS: Successful result of a normal-looking penis without fistula was achieved in all patients. One patient had meatal stenosis (3.84%) at the early postoperative period which was corrected by urethral dilatation of the external meatus at an interval of up to 2 months postoperatively.
CONCLUSION: Our technique represents a reasonable option for utilizing dorsal dartos subcutaneous tissue in TIP urethroplasty. The neourethra is covered symmetrically with a double layer of well-vascularized tissue and the penis is kept without rotation. Redundancy of the flap and its excellent vascularization depend on the harvesting technique. Further follow-up and a larger number of patients are needed before a final conclusion can be made.

29-


Liver injury during percutaneous nephrolithotomy (PCNL) is very rare and is usually overlooked. In this report, we present a case of inadvertent liver injury during right supracostal PCNL and describe diagnostic tools, conservative management measures, and outcome. A literature review of potential risk factors and suggested techniques to avoid injuring the liver during PCNL is also presented.

30-


OBJECTIVES: To investigate possible associated pathology in the prostate removed from patients with invasive bladder cancer and determine if there is a justification for prostate-sparing cystectomy.
PATIENTS AND METHODS: Between March 2005 and July 2007, 425 men (mean age 59 years, sd 8.23) had a cystoprostatectomy at our institute. The prostate was step sectioned at 2-3 mm intervals and any associated pathology determined; patient and tumour characteristics were correlated with prostatic pathology. The results were compared with those published previously, and the potential functional advantages of prostate sparing are reviewed and discussed.
RESULTS: Prostatic adenocarcinoma was detected in 90 of the 425 (21.2%) patients. There was no significant correlation between preoperative prostate-specific antigen level and the presence of adenocarcinoma, Gleason score or prostatic tumour stage. There was prostatic involvement as a result of direct invasion by the primary bladder tumour (contiguous) in 39 cases (9.2%). Concomitant (non-contiguous) transitional cell carcinoma of the prostatic urethra and/or ducts was detected in 27 specimens (6.4%). Additional findings were high-grade prostatic intraepithelial neoplasia in 43 patients (10.1%) and benign prostatic hyperplasia in 175 (41.2%).

CONCLUSION: We think that the potential oncological risks of prostate-sparing cystectomy outweigh any small and possible functional benefits; accordingly, the prostate should not be retained.


Liver injury during percutaneous nephrolithotomy (PCNL) is very rare and is usually overlooked. In this report, we present a case of inadvertent liver injury during right supracostal PCNL and describe diagnostic tools, conservative management measures, and outcome. A literature review of potential risk factors and suggested techniques to avoid injuring the liver during PCNL is also presented.


PURPOSE: We report functional results of the orthotopic ileal neobladder using a serous-lined extramural tunnel as an antireflux procedure.

MATERIAL AND METHODS: One-stage radical cystectomy and orthotopic ileal W-shaped neobladder creation were performed in 353 male and 97 female patients for invasive bladder cancer. The ureters were reimplanted using a serous-lined extramural tunnel for reflux prevention. Of the patients 344 were evaluable at a mean followup plus or minus standard deviation of 38 +/- 25 months. Evaluation included clinical and radiographic studies to determine functional and oncological outcomes.

RESULTS: Four patients (0.8%) died in the hospital. Early complications in 42 patients (9%) were treated conservatively but 3 women underwent vaginal repair of a pouch-vaginal fistula. During the observation period there were 90 oncological failures, of which 3 were isolated urethral recurrence. Late complications included pouch stones in 10 cases, outflow obstruction in 11, mucous retention in 2, adhesive bowel obstruction in 3 and hypercontinence in 9 females. The incidence of daytime and nighttime continence was 93.3% and 80%, respectively. The upper tracts remain unchanged or improved in 96.2% of the reimplanted renal units, while reflux was observed in 3%.

CONCLUSIONS: The serous-lined extramural tunnel has proved its efficiency and durability as an antireflux technique.

PURPOSE: The augmented valved rectum and double folded rectosigmoid bladder represent 2 modifications of ureterosigmoidostomy. Both procedures improve continence by lowering the reservoir pressure. We present the outcome of these techniques on the upper urinary tract, continence, metabolic profile, linear growth and bone density.

MATERIALS AND METHODS: Between March 1987 and May 1997, 22 boys and 11 girls with bladder exstrophy underwent urinary diversion to a low pressure rectal reservoir. Patient age at surgery ranged from 2 to 13 years (mean 5.4). The augmented valved rectum technique was used in 18 cases and the double folded rectosigmoid bladder method was used in 15. Serial followup ultrasounds were obtained and voiding proctography was performed 1 year postoperatively in all patients. Supine height was measured at last followup in all cases. Serum electrolytes, arterial blood gases, the results of which were plotted on an acid base nomogram, and bone density using dual energy x-ray absorptiometry were measured in all patients. Prophylactic alkalization was administered to all patients.

RESULTS: Mean followup is 66 months (range 24 to 148). All patients are continent during the daytime with an emptying frequency of 3 to 5 times, and all are continent at night. No patient experienced pyelonephritis or clinical acidosis. The upper urinary tract was either improved or stabilized in 64 of 66 renal units. No patient had reflux to the upper urinary tract. All patients had normal serum creatinine, sodium, potassium, calcium and phosphorus. Hyperchloremia was noted in 19 of the 33 patients (57%), and arterial blood gases showed subclinical metabolic acidosis in 18 (55%). Supine height measurements at last followup revealed that 19 of the 33 patients (57%) had decreased linear growth (below 3rd percentile). All patients had significant reduction in bone density, and mean for age corrected bone density was 70% (standard deviation 10.9%). Both groups (augmented valved rectum and double folded rectosigmoid bladder) were comparable in regard to age, sex and followup duration. There was no statistically significant difference between the groups in any parameter measured.

CONCLUSIONS: The augmented valved rectum and double folded rectosigmoid bladder provide preservation of the upper urinary tract with excellent continence rates. However, prophylactic alkalization and functional isolation of the reservoir do not prevent the long-term metabolic consequences. Subclinical metabolic acidosis and decreased linear growth are to be anticipated in more than 50% of patients. Moreover, significant bone demineralization is to be expected in all of these patients.


OBJECTIVE: To report on tumour angiogenesis and its relationship with morphological variables and prognosis in adenocarcinoma of the urinary bladder associated with schistosomiasis.

PATIENTS AND METHODS: Fifty-five vesical adenocarcinomas were evaluated from 30 men and 25 women (mean age 47.2 years, sd 8.7, range 30-65) who were followed up after radical cystectomy and urinary diversion for a mean (sd) of 61 (43.5, 2.7-159.5) months. Vessels were stained immunohistochemically using an antibody to the
platelet endothelial cell-adhesion molecule CD31. Microvessels were counted in active areas of angiogenesis within the tumours (at x250) and the microvessel density (MVD) quantified using the mean of three counts. Treatment failure was defined as death from cancer or the development of local recurrence or distant metastasis. Kaplan-Meier survival curves and Coxâ€™s proportional hazard model were used to assess survival.

RESULTS: The overall 5- and 10-year survival rates were 57% and 51%, respectively. The presence of lymph node metastasis and high mean vascular density (> 26) were significantly associated with a poor prognosis. The 5-year survival for patients with negative lymph nodes was 66% while no patients with positive nodes survived for 5 years (P < 0.001); the survival was 72% for patients with a low MVD and 33% for those with a high MVD (P = 0.0016). From individual results plotted against vascularity in lymph node-negative patients, there was a significantly better outcome for those with a low MVD (< or = 26; P = 0.0099); this significance was maintained on multivariate analysis. However, there was no significant relationship between angiogenesis and the different clinicopathological factors apart from the grade (P = 0.03); tumour stage, grade and DNA profile had no significant effect on survival in these patients.

CONCLUSIONS: These findings suggest that assessing angiogenesis using the MVD provides an independent predictor of survival in patients with adenocarcinoma of the urinary bladder.

35-

OBJECTIVES: To evaluate angiogenesis as a prognostic marker in squamous cell carcinoma of the urinary bladder in 154 patients who underwent radical cystectomy.

METHODS: The tumors from 98 men and 56 women (mean age 46.3 +/- 8.4 years) were examined. Vessels were stained using an antibody to the platelet endothelial cell adhesion molecule CD31. Microvessels were counted in active areas of angiogenesis within the tumors. Microvessel density (MVD) was quantified using the mean of three counts. Age, sex, tumor grade and stage, DNA ploidy, and MVD were evaluated in relation to outcome. Univariate and multivariate analyses of survival were performed.

RESULTS: The median follow-up period was 63 months. The overall 5-year survival rate was 56 +/- 4.1. Tumor grade, tumor stage, DNA ploidy, and MVD had a significant impact on the survival of patients in univariate analysis. The 5-year survival rate in patients with a low MVD (11 or less) was 68.1% compared with 50.4% for those with a high MVD (greater than 11; P <0.01). Men had more vascular tumors than did women. Also, high-grade tumors had significantly higher vascular counts. In a Cox proportional hazard model, tumor angiogenesis sustained its significant impact on survival of the patients in addition to tumor stage and DNA ploidy.

CONCLUSIONS: These findings suggest that angiogenesis and DNA ploidy are independent additional prognostic factors in patients with squamous cell carcinoma of the urinary bladder.

PMID: 12100926 [PubMed - indexed for MEDLINE]

36-
Treatment of urethral defects: skin, buccal or bladder mucosa, tube or patch? An

PURPOSE: We studied 3 graft materials and 2 urethroplasty techniques in 24 adult male mongrel dogs.

MATERIALS AND METHODS: The animals were divided into 2 equal groups. In group 1 a 4 cm. segment of perineal urethra was excised and tubed urethroplasty was performed using free full-thickness skin, buccal and bladder mucosa grafts in 4 dogs each. In group 2 a 4 cm. urethral strip was excised and onlay urethroplasty was performed using the same graft materials in 4 dogs each. Retrograde urethrography was done and the animals were sacrificed at week 12. Autopsy specimens were calibrated with a 10Fr catheter. Hematoxylin and eosin stained sections were examined. Masson's trichrome stain was used to determine the extent of fibrosis.

RESULTS: Urethral stricture was diagnosed by radiology and confirmed by calibration in 8 of the 12 dogs (66%) in group 1 but in only 1 of the 12 (8%) in group 2 (p <0.004). Buccal mucosa grafts were associated with the lowest stricture rate of 12%, followed by 37% for bladder mucosa and 62% for skin (p <0.2). There was no difference in neovascularization among the 3 grafts. Graft shrinkage was less than 10% for buccal mucosa compared with 20% to 40% for skin and bladder mucosa. The shrinkage rate was similar for the onlay and tube techniques. The intensity of chronic inflammation and fibrosis was highest in the skin grafts. Circumferential fibrosis was noted in association with tubed urethroplasty but not with the onlay technique.

CONCLUSIONS: The theoretical advantages of buccal mucosal grafts were pathologically demonstrated. When possible, grafts should be used as an onlay rather than as a complete tube.


PURPOSE: We compared the long-term functional results following two different reflux prevention techniques in orthotopic ileal bladder substitution in a prospective controlled randomized study.

METHODS: The study included 60 patients for whom orthotopic bladder replacement was indicated. The treated patients were prospectively randomized into two groups: group I (30 patients) underwent ileal W neobladder with serous lined extramural tunnel and group II (30 patients) received hemi-Kock pouch with intussuscepted nipple valve. Laboratory evaluation included estimation of serum creatinine while radiological studies included IVU and voiding studies. Urodynamic evaluation was an integral part of our investigation.

RESULTS: Patients and tumor characteristics were comparable between both groups. No operative or postoperative mortality were observed in either. Early complications were encountered in 5 (16.7%) and 4 (13.3%) patients in the two treated groups respectively (p=0.72) and most were treated conservatively. Twenty patients in group I and 19 in group II were evaluable. The mean follow up was 73.9+/−6.6 and 72.9+/−5.6 months in the treated groups respectively. Day and night time continence was comparable between both groups. Ascending studies demonstrated reflux in 3 (7.7%) of the reimplanted units
in group I versus 2 (5.3%) in group II (p=0.81); IVU showed uretero-ileal anastomotic strictures in 2 renal units with both the serous lined extramural tunnel (5.1%) and the ileal nipple valve (5.3%) techniques (p=0.98). One patient in group I had pouch stone compared with 5 in group II (p=0.08). Urodynamic characteristics were also comparable in both groups.

CONCLUSION: The study provided evidence that the long-term functional results following serous lined extramural tunnel are as equal as the nipple valve.

38-


PURPOSE: We performed a critical analysis of the results of radical cystectomy for invasive bladder carcinoma treated at 1 center.

MATERIALS AND METHODS: Between 1970 and 2000, 2,090 men and 630 women with invasive bladder cancer were treated with 1-stage radical cystectomy and urinary diversion. Followup ranged from 0 to 34.2 years with a mean of 5.5 +/- 5.7. Survival data were correlated to patient and tumor characteristics using univariate and multivariate analysis.

RESULTS: Postoperative mortality was 2.6%. Squamous tumors accounted for 49.4% of cases, transitional cell carcinoma for 36.4% and adenocarcinoma for 9.6%. Regional lymph nodes were involved in 20.4% of cases. The 5 and 10-year disease-free survival rates were 55.5% and 50.03%, respectively. Evidence was provided that tumor stage, histological grade and lymph node status are the only independent variables which affect survival probability.

CONCLUSIONS: Contemporary cystectomy can be performed with minimal mortality. Radical cystectomy for organ confined disease is followed by good therapeutic results and enhances the possibilities for functional restoration. With stage progression there is a stepwise reduction in survival probability. The radical operation can provide disease-free survival for an important subgroup of node positive cases (27.3%). Additional therapy is needed to improve the oncological outcome for advanced locoregional disease.

39-


PURPOSE: To evaluate the validity of the standard tubularized incised plate (TIP) urethroplasty technique for different kinds of hypospadias.

MATERIALS AND METHODS: from June 2002 to December 2003 and from March 2006 to October 2007 38 patients aged 1-22 years (average 7.34) were operated using the concept of TIP urethroplasty. The hypospadiac meatus were subcoronal in 28 patients (73.68%), midshaft in six (15.78%), and penoscroial in four (10.52%). Standard TIP urethroplasty in conjunction with double-layer covering of the neourethra with dorsal dartos flap were used in the primary cases (28 patients). In the secondary cases (four patients) and in boys who were circumcised before admission (six patients), modified TIP urethroplasty was used. The mean periods of hospitalization and follow-up were 0.92 days and 4.19 months, respectively.
RESULTS: No fistulas were observed in boys who underwent primary reconstruction using standard TIP urethroplasty. Fistulas were observed in two patients (5.26%)—one patient with penoscrotal hypospadias who underwent two-stage repair and another who was circumcised before admission. One patient had meatal stenosis at the early postoperative period which was corrected by dilatation of the external meatus at intervals up to 2 months postoperatively.

CONCLUSION: Standard TIP urethroplasty with double-layer covering of the neourethra with dorsal subcutaneous tissue is the procedure of choice for treatment of primary cases of distal/midshaft hypospadias. This technique seems suitable for reconstruction of proximal, secondary, and even complicated hypospadias.


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.


Robot-Assisted radical cystectomy and urinary diversion in female patients: Technique with preservation of the uterus and

Patient-assessed outcomes in Swedish and Egyptian men undergoing radical

OBJECTIVES: To compare two patient populations with assumed cultural differences undergoing radical cystectomy and orthotopic bladder substitution to determine whether these translate into differences in the answers to self-report instruments.

METHODS: The questionnaires Functional Assessment of Cancer Therapy-Bladder Cancer (FACT-BL), consisting of a general version (FACT-G) and a bladder cancer specific module, and Hospital Anxiety and Depression Scale (HADS) were used preoperatively and 3 and 12 months postoperatively to assess patient well-being, urologic symptoms, depression, and anxiety in 29 and 32 Swedish and Egyptian male patients, respectively.

RESULTS: Significant differences were found between the two groups. Higher FACT-G scores (ie, better outcomes) were obtained in the Swedish patients, both preoperatively and 3 months postoperatively, but not after 12 months. Differences were also seen in the urogenital assessment provided by the FACT-BL module. HADS revealed more depression among the Egyptian patients throughout the study period. Also, anxiety was more common preoperatively and 3 months postoperatively in the Egyptian patients, but not after 12 months.

CONCLUSIONS: Swedish men scored better than Egyptian men on the FACT-BL and HADS, although the latter improved with time after surgery. These results show that patient-assessed outcomes differ in patients from different sociocultural backgrounds. This should be recognized when analyzing results from comparative studies. Also, the use of culture-fair instruments is important when assessing patients with different sociocultural backgrounds.

43-


PURPOSE: We report on the functional results of continent ileal reservoir using serous lined extramural valves for reflux prevention and continent urinary outlet.

MATERIALS AND METHODS: The procedure was performed in 109 patients (68 men, 27 women and 14 children). The operation was indicated as a primary procedure in 93 patients and for conversion in 16. The technique entailed construction of a detubularized W-shaped ileal reservoir in which 2 serous lined troughs were created. Two tapered ileal segments were used, 1 for reflux prevention and the other as a continent outlet. The appendix was used for the construction of the outlet in 44 patients.

RESULTS: Two patients died in the hospital of pulmonary embolism. A total of 22 early complications were observed in 18 patients (16.5%). None of the patients required operative intervention. A total of 93 patients were evaluable with a mean followup of 36.6 +/- 25.4 months. All evaluable patients but 5 were continent day and night. Mean time for catheterization was 4 to 5 hours. There were 14 late complications reported in 11 patients (11.8%), including pouch stones in 5, stomal stenosis in 5, failure to catheterize in 2, parastomal hernia in 1 and adhesive bowel obstruction in 1. Upper urinary tract was
stable or improved in 94.8% of the renal units. Clinical acidosis did not develop in any of the patients.

CONCLUSIONS: Serous lined unidirectional valves are reliable. They provide a versatile surgical technique suitable for urinary diversion or conversion procedures. The operation is associated with an acceptable complication rate and is followed by good functional results.

44-


PURPOSE: To our knowledge the extent of lymphadenectomy with cystectomy, the number of lymph nodes to be retrieved and the anatomical groups to be dissected are still undetermined. This study was done to clarify these issues.

MATERIALS AND METHODS: A total of 200 patients underwent radical cystectomy and extended lymphadenectomy up to the level of origin of the inferior mesenteric artery. Removed tissues were labeled according to anatomical location and sent separately for pathological evaluation. In each group the number and status of lymph nodes were determined. The number of positive nodes was correlated with the number of retrieved nodes. Cases with a single positive node were identified and the anatomical location was defined.

RESULTS: The mean number of retrieved nodes per patient +/- SE was 50.6 +/- 14.4 and 48 (24%) patients had nodal disease. The mean number of positive nodes per involved case was 8.08 +/- 13.2. There was a weak correlation between the number of positive nodes and the number of harvested nodes. Bilateral disease was noted in 39.6% of cases. Single node involvement was observed in 22 cases, of which all except 1 were in the endopelvic region.

CONCLUSIONS: There is a sentinel region, which is the endopelvic region (that is the internal iliac and obturator groups of lymph nodes). There are no skipped lesions. Negative nodes in the endopelvic region indicate that more proximal dissection is not necessary. Bilateral endopelvic dissection is mandatory.

PMID: 15540728 [PubMed - indexed for MEDLINE]

45-


PURPOSE: We studied the factors that promote the incidence of nodal metastasis and characterized survival predictions in cases treated with radical cystectomy.

MATERIALS AND METHODS: We retrospectively studied 418 bladder cancer cases treated with radical cystectomy and bilateral endopelvic lymphadenectomy. The incidence of nodal involvement was correlated with several patient and tumor characteristics. The number of involved nodes was also correlated with the number of retrieved nodes. Finally, survival in node positive cases was correlated with some select pathological features.

RESULTS: Of the 418 cases nodal involvement was reported in 110 (26.3%). The mean
number of harvested nodes per patient +/- SE was 17.9 +/- 6.7. The mean number of positive nodes per involved case was 4.1 +/- 5.4. A weak correlation between the number of retrieved nodes and number of positive nodes was noted (r = 0.4). Tumor pT stage and grade, and lymphovascular invasion were independent factors promoting the incidence of nodal involvement. Three-year disease-free survival in node positive cases was 37.8% +/- 4.8%. Two factors had an independent impact on survival in node positive cases, namely pT stage and the number of positive nodes.

CONCLUSIONS: Tumor pT stage and grade, and lymphovascular invasion independently influence the incidence of lymph node involvement. There was a weak correlation between the number of retrieved nodes and number of positive nodes. The survival probability in pT N+ cases depended on pT stage and the number of involved nodes. A prospective study with anatomical mapping of retrieved nodes is necessary to define the optimal extent of lymphadenectomy with cystectomy.


OBJECTIVE: This retrospective study reports the outcomes as well as pre- and posttransplant urologic treatments of renal transplantation for children with an abnormal lower urinary tract (LUT).

METHODS: Between March 1981 and December 2001, 195 children (< or =18 years of age) received live-donor kidney transplants. The 15 recipients (14 boys and 1 girl, mean age 13.5 +/- 3 years) who had lower urinary tract disorders included posterior urethral valves (PUV) with valve bladder (n=12) and neuropathic bladders secondary to meningomyelocele (n=3). These children were evaluated by voiding cystourethrogram, cystourethroscopy, and cystometry. The children with PUV were maintained on clean intermittent catheterization (CIC) and a detrusor relaxant at least 3 months before transplantation. Augmentation ileocystoplasty or continent cutaneous diversion were used in three patients. The graft and patient survivals as well as complications in this cohort was compared with a group of children with normal LUT, who underwent renal transplantation during the same period.

RESULTS: One child died in the early posttransplant period due to rupture of the external iliac artery. Follow-up ranged from 6 months to 16 years (mean=4.5 years). During the same period the graft and patient survival rates were comparable between the group of children with versus without abnormal LUT. Furthermore, mean serum creatinine and creatinine clearance values were also comparable. The group with an abnormal LUT showed a higher incidence of urinary fistula (3/14) and recurrent UTI and/or bacteremia (4/14).

CONCLUSIONS: Renal transplantation is feasible with good results for children with abnormal LUT. Pre- and posttransplant urologic management is critical for a successful outcome. However these children display a high incidence of urologic and infectious complications.

47- Bladder cancer with obstructive uremia: oncologic outcome after definitive surgical management. El-Tabey NA, Osman Y, Mosbah A, Mohsen T, Abol-Enein H.
OBJECTIVES: To report the surgical and oncologic outcomes of patients with bladder cancer who present with obstructive uremia.

METHODS: A total of 61 patients presented to our institute with obstructive oliguria or anuria concomitant with bladder cancer. The mean serum creatinine at presentation was 11.4 +/- 5.1 mg%. After stabilization of kidney function following nephrostomy drainage, only 38 patients were eligible for radical cystectomy. Analysis of the intraoperative findings, early postoperative course, definitive histopathologic findings, and long-term functional and oncologic outcome was performed. The mean follow-up period was 16.2 +/- 8.1 months (range 8 to 134).

RESULTS: Radical cystectomy with bilateral iliac lymphadenectomy was feasible in 26 patients, palliative cystectomy in 10, and ileal conduit only without cystectomy in 2. The postoperative morbidity was minimal and treated conservatively. Bladder cancer causing uremia was invasive in 94.5%, and was pathologic Stage T4 in 30.5% of cases. At the mean follow-up, treatment failure was observed in 26 patients (68.4%), with only 12 patients living free of disease and a mean serum creatinine of 1.4 +/- 0.7 mg%. Although none of the preoperative variables proved to be predictive of the oncologic outcome, significant correlation was found between the tumor stage and grade, as well as lymph node involvement, and treatment failure.

CONCLUSIONS: Although bladder cancer causing obstructive uremia is almost always muscle invasive, with a large proportion of patients presenting with locally advanced disease, an adequate number of these patients could achieve long-term disease-free survival.


Evaluation of survivin reverse transcriptase-polymerase chain reaction for noninvasive detection of bladder

Role of combination of L-arginine and α-tocopherol in renal transplantation ischaemia/reperfusion injury: a randomized controlled experimental study in a rat model.

Abstract

What's known on the subject? and What does the study add? Renal ischaemia/reperfusion (I/R) injury is an inevitable consequence of kidney transplantation. It contributes to delayed graft function (DGF), acute renal failure and graft rejection. The present study investigates for the first time the impact of a combination of L-arginine and alpha tocopherol on the renal ischemia/reperfusion injury in a rodent model of kidney transplantation. We found that concomitant administration of L-arginine and α-tocopherol has a more protective effect and synergistic antioxidant effect on ischaemia/reperfusion injury in transplanted rat kidneys.

OBJECTIVES: To investigate the role of L-arginine and α-tocopherol in ischaemia/reperfusion injury in a kidney transplanted rat model.
MATERIALS AND METHODS: In total, 40 male Sprague-Dawley rats subjected to renal transplantation received FK506 (tacrolimus) to overcome early acute rejection episodes. Animals were divided randomly into four groups (ten rats each). Group I were treated with FK506 (2 mg/kg/bw/day) and served as the control group. Group II were treated with L-arginine 300 mg/kg/bw. Group III were treated with ±-tocopherol 30 mg/kg/bw. Group IV were treated with L-arginine and ±-tocopherol. Urine and blood samples were taken at 0 (before operation), 2, 7 and 14 days post-transplantation for estimation of urine sodium, creatinine, fractional excretion of sodium, serum creatinine, sodium and blood urea nitrogen. Histological examination and measurement of malondialdehyde in kidney tissues were also performed.

RESULTS: Serum creatinine and blood urea nitrogen significantly decreased in L-arginine and ±-tocopherol, as well as combination groups, compared to the control group. Malondialdehyde was significantly decreased in the combination group compared to L-arginine and ±-tocopherol alone. Histological examination of the control group showed that acute tubular necrosis was markedly decreased in transplanted kidneys treated with a combination of both L-arginine and ±-tocopherol.

CONCLUSIONS: Concomitant administration of l-arginine and ±-tocopherol has a more protective effect and synergistic antioxidant effect on ischaemia/reperfusion injury in transplanted rat kidneys.

Does the extent of lymphadenectomy in radical cystectomy for bladder cancer influence disease-free survival? A prospective single-center study.

Abstract

BACKGROUND: Controversy exists regarding the optimal extent of lymphadenectomy and the number of lymph nodes to be retrieved at radical cystectomy (RC).

OBJECTIVE: To compare the disease-free survival of patients with standard lymphadenectomy (endopelvic region composed of the internal, external iliac, and obturator groups of lymph nodes) versus extended lymphadenectomy (up to the level of origin of the inferior mesenteric artery) at RC in a prospective cohort of patients at a single, high-volume center.

DESIGN, SETTING, AND PARTICIPANTS: Prospective data were collected from 400 consecutive patients treated with RC for bladder cancer by two high-volume surgeons at Mansoura Urology and Nephrology Center. Of the 400 patients, 200 (50%) received extended lymphadenectomy and the other 200 (50%) underwent standard lymphadenectomy at RC. The patients did not receive any neoadjuvant or adjuvant therapy.

MEASUREMENTS: Patient characteristics and outcomes are evaluated.

RESULTS AND LIMITATIONS: Median patient age for the entire group was 53.0 yr. Ninety-six patients (24.0%) had lymph node metastases. Median follow-up was 50.2 mo.
Estimates of 5-yr disease-free survival in the extended lymphadenectomy group were 66.6% compared with 54.7% for patients with standard lymphadenectomy (p = 0.043). Extended lymphadenectomy was associated with better disease-free survival after adjusting for the effects of standard pathologic features (p = 0.02). When restricting the analyses to lymph node-positive patients, patients with extended lymphadenectomy had much better 5-yr disease-free survival compared with patients with standard lymphadenectomy (48.0% vs 28.2%; p = 0.029). The study was nonrandomized.

CONCLUSIONS: Extended lymphadenectomy is associated with better disease-free survival for bladder cancer patients with endopelvic lymph node involvement and should be considered in these patients.

51-

**Ileal urinary reservoir in pediatric population: objective assessment of long-term sequelae with time-to-event analysis.**

**OBJECTIVE:** To evaluate the long-term outcomes of an ileal urinary reservoir in children.

**METHODS:** This was a longitudinal study of pediatric patients who had undergone total ileal substitution of the bladder. Continence status was assessed, and all patients were evaluated for kidney function and biochemical profile. Standardized growth charts were used to assess linear growth. To assess bone mineral density, dual-emission x-ray absorptiometry scanning was performed. Clavien™s scale was used to report and grade the long-term complications and their timing. We used a simple quality of life questionnaire to assess the effect of the procedure on the quality of life of the growing child.

**RESULTS:** A total of 17 patients were included; 3 with orthotopic and 14 with continent cutaneous reservoirs. After a mean follow-up of 87.3 months, all patients were voiding with clean intermittent catheterization, with a 94% final continence rate. Two patients (11.7%) had an estimated glomerular filtration rate of ≤ 45 mL/min/1.73 m2 at the last follow-up examination. However, no clinically manifest metabolic acidosis was detected. No anemia or neurologic deficit was detected, with a low-normal serum level of vitamin B(12) in 2 patients (11.7%) and a low level in 1 patient (5.7%). One patient (5.7%) had chronic diarrhea. Low bone mineral density was found in 4 patients (22.8%), with 3 patients (17.1%) not exceeding the fifth percentile of height for age. High-grade complications (grade 3a-5) represented 64.5% of the complications, and the need for reintervention occurred late in the follow-up period. A high level of quality of life satisfaction was reported (88.5%).

**CONCLUSION:** Ileal neobladder construction allows child to pass into adolescence dry with more confidence and self-esteem, with no external urine collection set. However, long-term follow-up is mandatory to maintain the positive outcome.

52-

**Does the extent of lymphadenectomy in radical cystectomy for bladder cancer influence disease-free survival? A prospective single center study.**
BACKGROUND:

Controversy exists regarding the optimal extent of lymphadenectomy and the number of lymph nodes to be retrieved at radical cystectomy (RC).

OBJECTIVE:

To compare the disease-free survival of patients with standard lymphadenectomy (endopelvic region composed of the internal, external iliac, and obturator groups of lymph nodes) versus extended lymphadenectomy (up to the level of origin of the inferior mesenteric artery) at RC in a prospective cohort of patients at a single, high-volume center.

DESIGN, SETTING, AND PARTICIPANTS:

Prospective data were collected from 400 consecutive patients treated with RC for bladder cancer by two high-volume surgeons at Mansoura Urology and Nephrology Center. Of the 400 patients, 200 (50%) received extended lymphadenectomy and the other 200 (50%) underwent standard lymphadenectomy at RC. The patients did not receive any neoadjuvant or adjuvant therapy.

MEASUREMENTS:

Patient characteristics and outcomes are evaluated.

RESULTS AND LIMITATIONS:

Median patient age for the entire group was 53.0 yr. Ninety-six patients (24.0%) had lymph node metastases. Median follow-up was 50.2 mo. Estimates of 5-yr disease-free survival in the extended lymphadenectomy group were 66.6% compared with 54.7% for patients with standard lymphadenectomy ($p = 0.043$). Extended lymphadenectomy was associated with better disease-free survival after adjusting for the effects of standard pathologic features ($p = 0.02$). When restricting the analyses to lymph node-positive patients, patients with extended lymphadenectomy had much better 5-yr disease-free survival compared with patients with standard lymphadenectomy (48.0% vs 28.2%; $p = 0.029$). The study was nonrandomized.

CONCLUSIONS:

Extended lymphadenectomy is associated with better disease-free survival for blad