

Urological Survey

African Journal of Urology

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Results and Predictors of Success of Vesico-Vaginal Fistula Repair at a National Reference Level in Rwanda

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Objective: Vesico-vaginal fistulas (VVF's) cause enormous harm to women in developing countries. This prospective study intends to highlight epidemiological, etiological and pathological data, and to define predictors of surgical results in a national referral hospital setting.

Material and Methods: All consecutive patients with VVF presenting at the Kigali Hospital Centre of Rwanda between 1997 and 2001 were included. Data on epidemiology, pathology, therapy and outcome were prospectively obtained. The risk factors for therapeutic failure were identified by multivariate analysis.

Results: Ninety eight percent of all cases were of obstetrical origin. Twenty five percent of VVF were categorized as simple, 64% as complex and

11% as complicated. Complete closure and continence were obtained in 87 (77.7%) cases and closure with moderate incontinence in 7 cases (6.3%). In 18 cases (16%) closure failed even after 3 surgical attempts. The independent risk factors for therapeutic failure were vaginal fibrosis ($p < 0.001$) and total destruction of the bladder neck ($p = 0.002$).

Conclusion: We conclude that failure is basically linked to the level of destruction of the bladder neck as well as the magnitude of pelvic scarring. Surgery of complex and complicated VVF remains a challenge and requires multi-skilled surgeons. The lasting solution is the development of maternity services and the training of health personnel in reproductive health.

The Effect of Gum Arabic Oral Treatment on the Iron and Protein Status in Chronic Renal Failure Patients under Regular Hemodialysis in Central Sudan

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Objective: To assess the effect of gum arabic (*Acacia Senegal*) oral treatment on the iron and protein status in chronic renal failure patients.

Material and Methods: Thirty-six chronic renal failure (CRF) patients (under regular hemodialysis), and 10 normal subjects participated in this study. The patients were randomly allocated into the following groups: Group A (n=12): CRF patients under low protein diet (LPD) (less than 40 gram/day), and gum arabic (50 g/day) treatment; Group B (n=14): CRF patients under LPD, gum arabic, iron (ferrous sulphate 200 mg/day) and folic acid (5 mg/day) treatment; Group C (control group, n=10): CRF patients under LPD, iron and folic acid treatment; Group D (n=10): normal volunteers who were kept on normal diet beside a daily dose of 50 gm gum arabic. Each of the above treatments was continued for three consecutive months. Predialysis blood samples were collected from each subject before treatment, and twice per month for three months. Hemoglobin (Hb), hematocrit, total protein, albumin, globulin and 24-hour urine

volume as well as serum iron, total iron-binding capacity (TIBC), transferrin saturation, packed cell volume (PCV) and, mean corpuscular hemoglobin concentration (MCHC) were determined.

Results: Following administration of gum arabic oral treatment for three months, serum iron increased by 5.85% and 4.81% for groups A and B, respectively. These increases were significantly different from the baseline ($P < 0.05$), and control group C ($P < 0.01$). TIBC was significantly decreased in group A (4.44%) and in group B (4.31%) as compared with the baseline and control group C ($P < 0.05$). Transferrin saturation was significantly increased by 7.77%, and 9.59% for groups A and B, respectively, compared with the baseline ($P < 0.05$) and control group C ($P < 0.01$). Hb, PCV, MCHC, serum total protein, albumin and globulin, and 24-hour urine volume showed no statistically significant differences from the baseline and control groups.

Conclusion: The improvement in iron status due to oral administration of gum arabic could reduce the need for oral iron prescription.

Injuries Encountered during Rigid Ureteroscopy in Training Centers

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Objective: To analyze the peroperative injuries encountered during ureterorenoscopy (URS) in two training centers in Egypt over a four-month period.

Patients and Methods: A prospective computerized database of 88 patients (38 males and 50 females) who underwent URS at two urologic university training centers (Al-Azhar

University Hospital, Cairo and Assiut University Hospital, Assiut, Egypt) between July and October 2003 was analyzed. The procedures were elective in all cases. The indication for URS, the state of the ureter, associated pathologies, intraoperative injuries encountered and their management were recorded for analysis.

Results: All but seven patients were operated

for therapeutic indications, mainly stone disease and ureteric strictures. Peroperative injuries were encountered in 14 patients (15.9%) with the commonest type being mucosal laceration (57%) followed by minor ureteric perforations. Major injuries in the form of ureteric avulsion, laceration and extravasation were noted in 2% of the cases. The procedure was associated with inadvertent bladder or urethral injury in three patients. In all cases the diagnosis of the ureteric injury was prompt and confirmed by intraoperative ureterography. Treatment was

started immediately.

Conclusion: URS, although an important tool in the management of upper tract pathology, is an invasive procedure, especially for therapeutic indications. It may result in significant complications that may jeopardize the integrity of the concerned renal unit. Recent technology in the design of ureteroscopes and their accessories may minimize injuries, especially if applied in teaching hospitals where the learning curve of URS is a demanding task.

Skin Closure after Groin Hernia Repair in Children: A Comparative Study of three Suture Materials and two Suture Techniques

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Objective: The surgical scar is of great importance both to the patient and surgeon. For the patient an ugly scar may not only present a cosmetic problem but in some cases it may also impair function, and the surgeon is always confronted with the problem of possible litigation. This study was undertaken to evaluate the effect of different suture materials and skin suture techniques on surgical scars.

Patients and Methods: Three suture materials (chromic catgut 3/0, silk 3/0 and nylon 3/0) and two skin closure techniques (transcutaneous interrupted mattress and subcuticular continuous running sutures) were compared in a randomized partially blinded

fashion using a groin skin crease incision. The resulting scars were graded after two years using a conceived three-level scale.

Results: Subcuticular nylon sutures gave the best cosmetic results followed by subcuticular chromic catgut. Transcutaneous interrupted mattress silk sutures left the worst scars followed by subcuticular continuous running silk sutures.

Conclusion: The use of suture materials for skin closure is still the norm in developing countries. We therefore suggest that for any particular suture material, the subcuticular continuous running technique should be used and whenever possible the suture material of choice should be nylon.

Scheduling Tunneling TURP in Carcinoma of the Prostate

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Objective: Some patients with obstructing carcinoma of the prostate may fail to resume spontaneous voiding following bilateral orchidectomy. This group of patients would require an additional procedure in the form of

limited transurethral resection of the prostate gland (tunneling TURP) to be able to resume spontaneous voiding. The objective of this study was to compare performing simultaneous tunneling TURP and bilateral orchidectomy on

one hand with deferring channel TURP for at least one month after bilateral orchidectomy in cases where the patient has failed to resume spontaneous voiding on the other.

Patients and Methods: Forty-seven patients with obstructing carcinoma of the prostate were studied. Group I consisted of 22 patients who had simultaneous bilateral orchidectomy and tunneling TURP of the prostate, while Group II consisted of 25 patients who had tunneling TURP at least one month after bilateral orchidectomy. The groups were compared with regard to the ease of operation and postoperative management.

Results: Intra-operative bleeding, the need for repeated cleaning of the resection loop, the operating time and the hospital stay were significantly less in Group-II patients compared to Group I.

Conclusion: The results suggest that tunneling TURP when performed at least one month after bilateral orchidectomy allows enough time for a significant reduction of tissue friability, tissue adhesion to the resection loop, tumor circulation, intra-operative bleeding, operating time and postoperative hospital stay.

The Artificial Urinary Sphincter in the Male A Study of 23 Cases

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Objectives: To evaluate our experience with the placement of artificial urinary sphincters and to review the literature about the indications, additional measures required and prognosis of the device.

Patients and Methods: This retrospective study was based on 23 male patients who received artificial urinary sphincters of the AMS 800 type at the University Hospital of Dupuytren, Limoges, between April 1996 and April 2005. The mean age of our patients was 70.3 years (range 47 to 77 years). Eight patients had been treated previously by pelvic radiotherapy for prostate cancer. Sphincter insufficiency occurred following radical prostatectomy in 10, endoscopic resection of a prostatic adenoma in 5, transvesical adenectomy in 4 and endoscopic sphincterotomy with bladder augmentation in 2 patients, as well as following external radiotherapy for the treatment of a localized prostatic adenocarcinoma stage T2a in one and a cystoprostatectomy with Camey II type bladder replacement in the remaining case. Routine investigations included urine analysis, assessment of a possible concomitant inflammation or infection, urethroscopy and a urodynamic work-up. Pelvic floor training was done in all cases, while macropastique was administered in 15 cases only. Finally, an artificial sphincter was placed in periurethral position in all cases.

Results: The functional results of the artificial sphincter were assessed 6 months after activation of the sphincter and were based on the clinical results as well as on the patient's satisfaction. Eighteen out of our 23 patients are completely satisfied, while the 5 remaining patients report minimal urinary leakage. One of them reported a reduction of urinary flow. In 9 cases late complications were noted; three of them could be easily repaired (a technical problem caused by high pressure in the balloon, one minimal vesicoparietal fistula and migration of the pump needing reposition). The 6 remaining cases suffered from urethral erosion caused by the cuff of the device which incurred within a mean time of 5 years following the placement of the artificial sphincter.

Conclusion: The high rate of satisfaction reported by the patients has proved the efficacy of the AMS 800 artificial sphincter in the treatment of urinary incontinence caused by sphincteric insufficiency. Nevertheless, a number of failures is still reported. They may cause severe complications eventually leading to the removal of the device, especially in cases of erosion. For this reason, it is mandatory to respect the indications, to carefully select the patients and to ensure an adequate follow-up to avoid any late complications.

Study of Erectile Dysfunction in a Population of Young and Sexually Active Men in Burkina Faso

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Objective: This study was carried out among a young population of working men to determine the prevalence of erectile dysfunction (ED) in our environment and to evaluate the patients' knowledge about and attitude towards this problem.

Patients and Methods: This study was based on a survey carried out on male subjects aged 18 and above over a period of six months. The survey was done during an annual medical check-up of men working in local companies and some civil servants. Those who agreed to participate in the investigation (855 men), had to complete two questionnaires: the 5-item questionnaire of the International Index of Erectile Function (IIEF-5) evaluating the quality of erectile function and a questionnaire drawn up by our team with the aim of evaluating the participants' knowledge about and their attitude towards the problem of ED. The questionnaires were analyzed using the Epi info program.

Results: The 855 subjects that took part in the investigation accounted for 80% of all men that

had been asked to participate in the survey. The average age was 37.4 ± 9.1 years; more than two thirds of the participants (78%) were married and 69% were monogamous. The overall prevalence of ED was 47% and we noticed that it increased with age. Three risk factors were identified: age, arterial hypertension and hemorrhoidal disease. Age and arterial hypertension are classic risk factors for ED, while hemorrhoidal disease has so far not been considered as such. In our study, especially for the men interviewed, it has played an important role. 93.2% of the questioned subjects said that they would be ready to consult for ED, whereas in fact only 3.8% had taken medical advice.

Conclusion: ED appears to be a real problem, also for younger men, in our environment. However the results of this study cannot be generalised, and we are planning to undertake other studies based on the general population which will allow us to draw more valid conclusions and to better organize treatment of these patient.

Abscess of the Psoas: Diagnostic and Therapeutic Aspects

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Objective: Abscess of the psoas which was first described by Mynter in 1881 is a rare disease. Herein, the authors report on their experience with the treatment of this pathology.

Patients and Methods: Between Januar 1999 and December 2002, 15 patients with abscess of the psoas were seen at our department. They were 12 males (80%) and 3 females (20%) with a mean age of 53 years (range: 27 - 70 years). Mean hospital stay was 6 weeks (range: 2 - 24 weeks). All patients were examined by abdominal ultrasonography, 9 by computed tomography. Surgical drainage via a small incision of 5 cm was

done in 12 patients, while three patients received medical treatment in combination with a percutaneous drainage.

Results: The clinical manifestation included fever in 9 (60%), psoitis in 6 (40%), a mass in the lumbar region in 5 (33%) and an inguinal mass in 3 (20%) patients. Hyperleucocytosis varying between 13000 and 340000/mm³ was found in all patients. The main organisms isolated were staphylococcus aureus (54%), Koch's bacillus (38.4%), Escherichia coli (15%) and Klebsiella (8%). De novo abscess of the psoas was found in 4 patients (26.6%), while it was secondary in 11

patients (73.3%). Surgical drainage of the pus was done via the anterolateral extraperitoneal lumbar approach in 8 patients and via the high inguinal approach in 4 patients. In three patients medical treatment combined with percutaneous drainage was sufficient. The immediate outcome was good in all patients.

Conclusion: The pathogenesis of de novo

abscess of the psoas is unknown as yet, and its diagnosis remains a challenge for the physician. However, the precise clinical diagnosis and the choice of the therapeutic measures have been facilitated by the development of modern imaging facilities. Surgical treatment should be reserved to those cases where percutaneous drainage has failed.