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CASEBOOK

DOCTOR OF MEDICINE
(UROLOGY)

NATURAL HISTORY OF SUPERFICIAL BLADDER CANCER

- Under the umbrella term 'superficial bladder cancer' are included a number of heterogenous tumours each with its own biologic aggressive potential, measured by their ability to recur, invade and metastasize, and determined by the identification of a number of adverse risk factors. It is important to know the natural history of these various tumours in order to determine the need for adjunctive treatments such as intravesical therapy as well as the need for more aggressive treatment such as radical cystectomy. In addition, the follow-up schedules of these tumours can be individually tailored according to the presence of these adverse risk factors.

UPPER TRACT TRANSITIONAL CELL CARCINOMA

- The issues involved in the appropriate selection of patients with upper tract transitional cell carcinoma to undergo the standard recommended treatment, nephroureterectomy, as opposed to conservative techniques such as renal conserving open surgery or endourologic therapies is discussed.

WHAT IS THE ROLE OF LYMPHADENECTOMY IN RADICAL NEPHRECTOMYFOR RENAL CELL CARCINOMA.

- Radical nephrectomy is currently the only effective method of treatment of primary renal cell carcinoma (Belldegrun and deKemion, 1998). However, the need to perform a complete regional lymphadenectomy as part of radical nephrectomy in the treatment of renal cell carcinoma remains controversial (Novick and Streem, 1998). Does the performance of a Regional lymphadenectomy confer some therapeutic benefit or does it simply allow more accurate staging of the extent of renal cell carcinoma? The author believes that regardless of the state of the nodes or the stage of the primary tumour a regional lymphadenectomy only achieves precision in staging, and therefore advocates that a node sampling, rather than a complete lymphadenectomy be performed as part of radical nephrectomy.

CURRENT ROLE OF ELECTIVE NEPHRON SPARING SURGERY

- Radical nephrectomy is considered the standard treatment for potentially curable renal cell carcinoma (RCC). Recently, less radical options have been proposed as being equally effective at eradicating cancer while at the same time preserving more renal tissue. Proponents of the latter approach advocate it as a viable alternative to radical surgery in situations where adoption of a more conservative approach is not considered mandatory, i.e., where there is a functionally normal contralateral kidney. The term "elective" is used in this situation to indicate the non-essential nature of nephron sparing surgery (NSS) when done under these circumstances. The purpose of this case discussion is to look at the arguments for and against elective NSS, based on the currently available literature, and to re-visit the role of NSS in general, and from this exercise, determine whether elective NSS can be currently recommended to patients as a safe,

acceptable and efficacious cancer curing operation or whether it should only be offered in the setting of a randomised clinical trial.

SCREENING FOR PROSTATE CANCER

- The issue of whether to screen for prostate cancer is a very controversial one. There are those who feel that men 50 - 69 years of age ought to be screened on the basis that advanced prostate cancer starts as a small preclinical tumour at some point, with the ability to be cured if detected at that stage. Others feel that there is not enough evidence to support prostate cancer screening as being beneficial and in fact caution that it may be harmful. Using the well establised criteria on which a sound screening programme should be based, this case discussion will examine the issues involved in prostate cancer screening and seek to determine whether these criteria are currently satisfied or not and thereby determine whether prostate specific antigen (PSA) based prostate cancer screening programmes can be recommended.

CARCINOMA OF THE PENIS-CONTROVERSIES IN THE MANAGEMENT OF INGUINAL LYMPH NODES

- The management of inguinal lymph nodes in patients with squamous cell carcinoma of the penis is controversial. The controversy surrounds the need for and timing of inguinal lymphadenectomy in patients with clinically nonpalpable inguinal nodes. This case report and the subsequent discussion will serve to examine the currently available literature on whether this subset of patients do benefit from an inguinal lymphadenectomy and if so, seek to determine if there are any identifiable adverse risk factors which confer a higher likelihood of inguinal micrometastases, and therefore a greater degree of benefit from lymphadenectomy. The issue of immediate (prophylactic) as opposed to delayed (therapeutic) lymphadenectomy in this group of patients will also be examined.

UNILATERAL ESSENTIAL HAEMATURIA

- A typical case of chronic unilateral essential haematuria is presented which highlights the difficulty pose to the urologist in diagnosis and treatment. In addition, current modalities of investigation and treatment are discussed.

MINIMALLY INVASIVE TECHNIQUES IN TREATING ADULT PEL VIURETERIC JUNCTION OBSTRUCTION

- The standard treatment for adult pelviureteric junction *(PUl)* obstruction has been dismembered pyeloplasty, which is typically performed through a flank: incision. Recently a number of minimally invasive therapies (MIT's) have been tried with almost equivalent success in the treatment of this disorder. Not all patients however, are suitable candidates to be treated by these newer techniques and appropriate case selection is vitally important if a successful outcome is to be achieved.

FEMALE URETHRAL DIVERTICULUM

- Female urethral diverticulum is an interesting condition which only gained increasing recognition in the latter half of this century (Young et al, 1996). With the advent of positive pressure urethrography in the 1950's there has been increased awareness and recognition of this condition. Female urethral diverticulum should be remembered as a cause of lower urinary tract symptoms in mostly middle-aged women and certainly is one of the differential diagnoses for an anterior vaginal wall mass. Thought to be still under-diagnosed, a high index of clinical suspicion and an awareness of the entity are

required in the appropriate clinical situation so as not to miss the diagnosis. Once suspected, the appropriate clinical, radiologic, and cystoscopic evaluation should take place so as to facilitate expeditious treatment.

STRESS URINARY INCONTINENCE-TO SLING OR TO SUSPEND

- Female stress urinary incontinence (Sill) may adversely affect quality of life. Patients with this disorder have traditionally been classified as having either urethral hypermobility (UH) or intrinsic sphincter deficiency (ISD) or a combination of both. Patients with UH have usually been treated by some kind of suspension procedure, while those with ISD have been treated by techniques which increase urethral coaptation and compression such as a sling procedure. Although believed by many to be an independent cause of SUI, UH on its own, may however not be a cause of the latter as it is seen in many women who do not have SUI. The author shares the view that all women with SUI have some degree of ISD and it is the latter that is of importance in determining whether Sill becomes clinically manifest. By extension, it is this ISD that must be surgically addressed to result in high durable cure rates. As sling procedures specifically addresses ISD the author recommends that sling cystourethropexy is the treatment of choice for most cases of SUI requiring surgical intervention.

ADUL T PENILE CURVATURE

- Penile curvature in adults may be congenital or acquired, and in the latter case is usually due to Peyronie’s disease. A number of treatment options, both medical and surgical, exist for the treatment of penile curvature occurring in adults. Which option is selected depends heavily on an accurate assessment of the patient, as well as an understanding of the natural history and evolution of these disorders. Failure to do this will lead to treatment failure and patient dissatisfaction.

UROLOGICAL MANAGEMENT OF PATIENTS WITH SPINAL CORD INJURY AND AN OVERACTIVE BLADDER

- The aim of urological management of patients with spinal cord injuries is to preserve renal function, maintain or restore urinary continence, and prevent urinary tract complications such as recurrent urinary tract infections and urolithiasis, thereby maintaining a reasonably good quality of life. When conservative measures fail or are deemed inappropriate surgical intervention is required to lower intravesical pressure and / or increase bladder capacity to protect the upper tracts from further deterioration. A number of reconstructive operations exists from which one may be chosen to achieve this aim. Which of these procedures is chosen requires a critical evaluation of the patient's overall functional status, degree of motivation, level of intelligence and expectations as well as an appreciation of the problems associated with each method of reconstruction.

EVALUATION AND MANAGEMENT OF ADULT BLUNT RENAL TRAUMA.

- The management of adult patients with major blunt renal trauma remains controversial. Whichever management regime is proposed, the aim should be to ensure overall patient safety, while simultaneously preserving as much renal function as possible, with the least number of complications. To achieve this aim, some authors propose renal exploration in most of these patients while others recommend adoption of a more

conservative approach, with renal exploration reserved for selected patients who satisfy specific criteria. The latter approach is the on favoured by the author as it achieves the stated aims, while reducing the need for operative intervention, with its associated morbidity and expense.

POSTPROSTATECTOMY INCONTINENCE

- Post prostatectomy incontinence (PPI) is a devastating complication of prostate surgery for patient and surgeon alike. An infrequent complication of transurethral resection of the prostate (TURP), it is seen more commonly following radical prostatectomy for localized prostate cancer. This complication is especially unwelcome in an era when asymptomatic men are being screened for the presence of prostate cancer and men with benign prostatic obstruction (BPO) are being operated on for severe symptoms rather than traditionally recognized absolute indication for surgery such as urinary retention and renal impairment. These patients not only expect to be cured of their disease, they also expect a good quality of life afterwards. This case discussion will serve to highlight the varied aetiologies of post-prostatectomy incontinence and their pathogenetic mechanisms, and will also look at the diagnosis and treatment of the problem.

GUN SHOT WOUNDS OF THE URETER

- Gun shot wounds (GSWs) of the ureter are uncommon injuries but when they occur are often missed as they are usually accompanied by other more obvious and urgent visceral injuries which may overshadow the presence of the ureteric injury. As a result, GSWs of the ureter often present in a delayed fashion, with resultant increased morbidity. To avoid this, it is important at the initial presentation to be aware of the possibility of these injuries and to have a high index of suspicion for their presence in suggestive circumstances. The appropriate radiological and if necessary operative intervention can then take place so as to achieve an optimum outcome. A case is presented of GSW of the ureter and the diagnosis, management and complications of this injury discussed.

MANAGEMENT OF LOWER POLE RENAL STONES

- What constitutes the optimal treatment of symptomatic lower pole renal stones is a controversial topic. Some believe that shock wave lithotripsy (SWL) constitutes optimal treatment for the majority of lower pole stones, while others consider percutaneous nephrolithotomy (PCNL) to be the most cost-effective treatment modality. Yet others are investigating the possibility of retrograde intrarenal surgery (RIRS) using the flexible ureteropyeloscope as becoming the most cost effective treatment modality. In fact, there may not be anyone single treatment modality that is optimal in all patients, rather these three modalities of treatment may be applied to obtain optimum outcomes in different situations. In considering which of these three modalities of treating lower pole renal stones is the optimal one in a particular patient, a number of factors need to be taken into consideration. These may be divided into patient factors, stone factors, anatomical factors, and treatment modality factors. How each of these factors impacts

upon the selection of one of the three treatment modalities mentioned above in a particular patient will be explored in the discussion that follows.