

Urology and Renal Health

October 25, 2022 | Webinar







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Received date: 03 October 2022 | Accepted date: 05 October 2022 | Published date: 31 October 2022

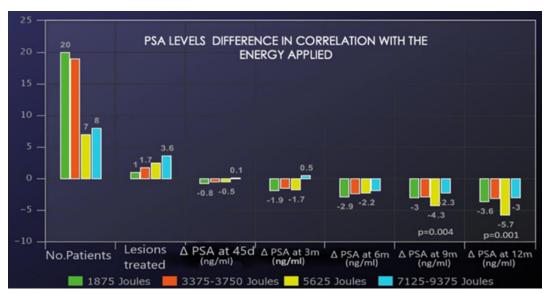


Nickoloas Mertziotis

Metropolitan General Hospital, Greece

Focal therapy for localized low and intermediate risk Prostate cancer

During the last three decades, prostate cancer detection has decreased regarding the age of men by approximately 10 years. On the other hand, men's life expectancy has increased by almost 4 years. Along with the high rates of diagnosis for low- and intermediate-risk prostate cancers the interest in minimally invasive treatments like focal therapy because of its lower rates of side effects has expanded. Consequently, focal therapy is a rapidly evolving field that covers several ablative techniques, energy sources, and treatment options. The rationale behind focal therapy is simple, targeting the predefined cancerous lesions of the prostatic tissue leaving intact the rest of the healthy cells of the organ. The establishment of focal therapies faces many challenges. For focal therapy to evolve into an accepted segment of prostate cancer treatment, more research is needed. I herein present the results of our long term in prostate cancer focal laser ablation.



Recent Publications

 Technical note: inter- stitial laser photocoagulation for the treatment of prostatic cancer," Z. Amin, W. R. Lees, and S. G. Bown, "British Journal of Radiology, vol. 66, no. 791, pp. 1044

– 1047, 1993.

Clinical Nephrology and Research

Urology 2022

Volume 06

October 25, 2022



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- Predicting out bore prostate cancer focal laser ablation failure and biochemical relapse using the correlation with the surrounding tissue temperature parameters during treatment. N.Mertziotis, D.Floratos, D.Kozyrakis, M.Lardas November 2020 European Urology Open Science 21:S114-S115
- 3. "Gold nanoshell-localized photothermal ablation of prostate tumors in a clinical pilot device study "Ardeshir R. Rastinehada, et al ,1 PNAS | September 10, 2019 | vol. 116 | no. 37
- 4. "New and Established Technology in Focal Ablation of the Prostate: A Systematic Review" Massimo Valerio 1, Yannick Cerantola 2, Scott E Eggener 3, Herbert Lepor 4, Thomas J Polascik 5, Arnauld Villers 6, Mark Emberton 7.Eur Urol . 2017 Jan;71(1):17-34

Biography

Nick Mertziotis is a Consultant Urological and Andrological Surgeon Head of Reconstructive Urology and Surgical Andrology Metropolitan General Hospital- Metropolitan group of Hospitals, Athens, Greece. He is the President of the Greek Association of Focal Therapy; President of the Greek Association foro Preventive Medicine and Primary Health and the ex- Urology Registrar, Institute of Urology, Middlesex Hospital of London, University College of London, U.K. He has a list of 80 Greek and International publications, and has participated with oral presentations at most of the European Urological Congresses of the last years. He functions as a regular reviewer of most International Urological journals and as a Council Board Menber of Greek Urodynamics and Urogynecology Section of Hellenic Urological association

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 17 July 2022 | Accepted date: 20 July 2022 | Published date: 31 October 2022



Jens Rassweiler

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Low-energy shock wave therapy in the management of wound healing following Fournier's gangrene – a new approach

This is a report on postoperative management of wound healing in four cases of Fournier's gangrene which have been successfully carried out by use of Low-intensity Shock Wave Therapy (Li-ESWT). In three cases, with Li-ESWT (3 sessions per week with 2000 shock waves at 3 Hz applying 0.25 mJ/mm2) we were able to close wound dehiscence secondary to plastic surgery with skin flaps. In one patient, Li-ESWT resulted in complete closure of the extended wound with restoration of the local scrotal and penile skin. This is the first report on successful application of Li-ESWT for this indication. The restoration of local skin rather than closure of the wound by fibrous tissue could be related to promotion of stem cells, which has been discussed previously for other indications, such as treatment of chronic ulcers respectively restoration of the pelvic floor.

Recent Publications

- 1. Mopurgo E, Galandiuk S. Fournier's gangrene. Surg Clin North Am. 2002;1213-24.
- Schaden W, Thiele R, Kölpl C, Pusch M, Nissan A, Attinger CE, Maniscalco-Theberge ME, Peoples GE, Elster EA, Stojadinovic A. Shock wave therapy for acute and chronic soft tissue wounds: a feasibility study. J Surg Res. 2007;143(1):1-12
- 3. Mittermayr R, Antonic V, Hartinger J, Kaufmann H, Redl H, Téot L, Stojadinovic A, Schaden W. Extracorporeal shock wave therapy (ESWT) for wound healing: technology, mechanisms, and clinical efficacy. Wound Repair Regen. 2012;20(4):456-65.
- 4. Haupt G, Haupt A, Ekkernkamp A, Gerety B, Chvapil M. Influence of shock wave healing. Urology 1992; 39: 529-532
- Rassweiler J et al. Re: Extracorporeal shock wave therapy (ESWT) in Urology: A systematic review of outcome in Peyronie's disease, erectile dysfunction, and chronic pain. (Words of Wisdom) Eur Urol 2018; 74: 115-117
- Lin G, Van Kuiken M, Wang G, Banie L, Tan Y, Zhou F, Wang Z, Chen Y, Zhang Y, Lue TF. Microenergy acoustic pulse therapy restores function and structure of pelvic floor muscles after simulated birth injury. Transl Androl Urol. 2022 May;11(5):595-606.

Biography

Jens Rassweiler started his Urological Education in 1982 at Katharinen hospital, Stuttgart. From 1988 to 1994 he was the Vice-chair of the Department of Urology, Medical School Mannheim. He was involved in the clinical introduction of extracorporeal shock wave lithotripsy including three generations of lithotripters. In 1992, he was the first German Urologist to perform a laparoscopic nephrectomy. In 1994, he became the Chairman of the Department of Urology and Pediatric Urology at SLK Kliniken Heilbronn, University of Heidelberg. In 2020, he was president of the German Society of Urology (DGU). He was elected as the Chair of the faculty of Urology and Andrology of the Danube Private University in Krems, Austria in the year 2022.

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Sessions

Session on: Urological Oncology | Endourology | Urology | RNA aptamer | Renal cell carcinoma | Chronic kidney diseases

Session Introduction

- Title: Circadian rhythm-related miR-6883-5p suppresses Enzalutamide-resistant prostate cancer
 - proliferation via inhibiting AR-V7 expression
 - Wenchang Yue, Soochow University, China
- Title: Concordance between biparametric MRI and Radical prostatectomy specimen in the detection
 - of clinically significant prostate cancer and staging
 - Rammah Abdlbagi, Northampton General Hospital, United Kingdom
- Title: Local availability influences choice of radical treatment for prostate cancer
 - Jemini Vyas, Northampton General Hospital, United Kingdom
- Title: In silico Design of RNA Aptamers for therapy, diagnosis, and drug delivery
 - Muhammad Ashraf, Ain Shams University, Egypt
- Title: Predictive quantitative MDCT models for characterization of renal cell carcinoma subtypes
 - and differentiation from renal oncocytoma: Three phase Nomogram approach analysis.
 - Haytham Shebel, Mansoura University, Egypt
- Title: Restore renal function in Chronic Kidney Disease by hydro pressure therapy
 - Shrikant L Kulkarni, Kulkarni Clinic, India
- Title: Urolithiasis a systemic disease beyond
 - Bernhard Hess, Hirslanden Klinik Im Park, Switzerland
- Title: Ureteral stents with extraction strings: patient reported outcomes.
 - Rammah Abdlbagi, Northampton General Hospital, United Kingdom
- Title: The impact of centralisation on radical prostatectomy outcomes: Our outcomes
 - Jemini Vyas, Northampton General Hospital, United Kingdom
- Title: The rise of telepharmacy services during the COVID-19 pandemic: A comprehensive
 - assessment of services in the United Arab Emirates
 - Hala J. Al-Obaidi, Ajman University, UAE
- Title: Identification of marine fish peptides as a treatment option against the multidrug-resistant
 - Acinetobacter baumannii
 - Afsar Ahmed Sumon, King Abdulaziz University, Saudi Arabia
- Title: Laparoscopic radical nephrectomy for large renal mass with level I renal vein thrombus
 - Ahmed Abouelkhair, Damanhour Oncology centre, Egypt

Title: Laparoscopic radial nephrectomy: Are there limits?

Ahmed Abouelkhair, Damanhour Oncology centre, Egypt

Title: An integrative ligand-based pharmacophore modeling, virtual screening, and molecular

docking simulation approaches identified natural lead compounds against lung cancer by

targeting acetylcholinesterase

MD Golap Hossain, King Abdulaziz University, Saudi Arabia



Urology and Renal Health

October 25, 2022 | Webinar

Received date: 15 August 2022 | Accepted date: 22 August 2022 | Published date: 31 October 2022

Circadian rhythm-related miR-6883-5p suppresses Enzalutamide-resistant prostate cancer proliferation via inhibiting AR-V7 expression

Wenchang Yue1, Ying Xu2, Jianquan Hou3

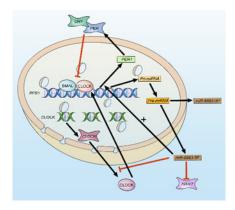
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Prostate cancer is the second most prevalent cancer in men and the sixth leading cause of cancer death worldwide. Age, family history, race, tobacco use, obesity, diet, and circadian disruption are all risk factors for prostate cancer. Epidemiological studies of circadian disruption focus primarily on night shift work. The 2017 Nobel Prize in Physiology or Medicine was awarded to Jeffrey C. Hall, Michael Rosbash, and Michael W. Young for making it possible to study the molecular mechanisms underlying circadian rhythms. The molecular mechanisms between circadian rhythm genes and diseases, including prostate cancer, have been gradually revealed, and these studies hold promise for future clinical application.

However, the relationship between the molecular mechanism of circadian rhythm and the development of prostate cancer has not been fully clarified. We observed that a microRNA plays an important role in the regulation of circadian rhythms and prostate cancer proliferation. Our study shows that miR-6883-5p is associated with circadian rhythm and can inhibit AR-V7, thereby suppressing the growth of enzalutamide-resistant prostate cancer. Our research provides a potential therapeutic target for enzalutamide-resistant prostate cancer and expands the understanding of circadian clock regulation regulatory mechanisms.



Recent Publications

- Yue W, Du X, Wang X, et al. Prognostic values of the core components of the mammalian circadian clock in prostate cancer. PeerJ. 2021;9:e12539. Published 2021 Dec 9. doi:10.7717/peerj.12539
- Sun J, Yue W, You J, et al. Identification of a Novel Ferroptosis-Related Gene Prognostic Signature in Bladder Cancer. Front Oncol. 2021;11:730716. Published 2021 Sep 7. doi:10.3389/fonc.2021.730716



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- Sun J, Wei X, You J, et al. STC1 is a Novel Biomarker Associated with Immune Characteristics and Prognosis of Bladder Cancer. Int J Gen Med. 2021;14:5505-5516. Published 2021 Sep 11. doi:10.2147/IJGM.S329723
- Yue W, et al. Circadian rhythm-related miR-6883-5p suppresses enzalutamide-resistant prostate cancer proliferation via inhibiting AR-V7 expression. (Contributing)
- 5. Yue W, et al. Important hub-RNAs in the development of prostate cancer identified by RIC-seq.

Biography

Yue Wenchang, from the First Affiliated Hospital of Soochow University in China, has completed urology resident standardization training in China and is now a Ph.D. candidate in urology, Soochow University. The primary focus of research is the association between prostate cancer and circadian rhythm. In addition, Yue has worked on the Internet for many years to popularize medical science, and his content has been read hundreds of millions of times.

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Urology and Renal Health

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Received date: 30 September2022 | Accepted date: 03 October 2022 | Published date: 31 October 2022

Concordance between biparametric MRI and Radical prostatectomy specimen in the detection of clinically significant prostate cancer and staging

Rammah Abdlbagi, Egemen Tezcan, Kriti Tripthi, Vinayagam Sudhakar, Thomas Swallow, Aakash Pai Northampton General Hospital, UK

Introduction and Objectives: MRI has an increasing role in the diagnosis and staging of prostate cancer. Multiparametric MRI includes multiple sequences including T2 weighting, diffusion weighting and Dynamic Contrast Enhancement (DCE). Administration of DCE is expensive, time consuming and requires medical supervision due to the risk of anaphylaxis. Biparametric MRI (bpMRI), without DCE, overcomes many of these issues, however there is conflicting data on its accuracy. Furthermore, data on the concordance between bpMRI lesion and pathology specimen, as well as the rates of cancer stage upgrading after surgery is limited within the available literature. This study aims to examine the diagnostic test accuracy of bpMRI in the diagnosis of prostate cancer and radiological assessment of prostate cancer staging. Specifically, we aimed to evaluate the ability of bpMRI to accurately localise malignant lesions to better understand its accuracy and application in MRI-targeted biopsies.

Materials and Methods: One hundred and forty patients who underwent bpMRI prior to Radical Prostatectomy (RP) were retrospectively reviewed from a single institution. Histological grade from prostate biopsy was compared with surgical specimens from RP. Clinically significant Prostate Cancer (csPCa) was defined as Gleason grade group ≥2. bpMRI staging was compared with RP histology.

Results: Overall sensitivity of bpMRI in diagnosing csPCa independent of location and staging was 98.87%. Of the 140 patients, 29 (20.71%) had their prostate biopsy histology upgraded at RP. 61 (43.57%) patients had csPca noted on RP specimen in areas that were not identified on the bpMRI. 55 (39.29%) had upstaging after RP from the original staging with bpMRI.

Conclusions: Whilst the overall sensitivity of bpMRI in predicting any clinically significant cancer was good, there was notably poor concordance in the location of the tumour between bpMRI and eventual RP specimen. The results suggest that caution should be exercised when using bpMRI for targeted prostate biopsies and validates the continued role of systemic biopsies. Furthermore, a significant number of patients were upstaged at RP from their original staging with bpMRI. Based on these findings, bpMRI results should be interpreted with caution and can underestimate the TNM stage, requiring careful consideration of treatment strategy.

bpMRI Results:

Item	Percentage
bpMRI sensitivity	98%
Upstaging after prostatectomy	39.29%





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Biography

Rammah Abdlbagi is a urology junior doctor at Northampton General Hospital (United Kingdom). He graduated from Sudan on 22/09/2016 from Alzaem Alzhari university's faculty of medicine. He completed his full Membership of the Royal College of Surgeon Edinburgh (MRCSed) on 03/2018.

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Clinical Nephrology and Research



Urology and Renal Health

October 25, 2022 | Webinar

Received date:02 October 2022 | Accepted date:10 October 2022 | Published date: 31 October 2022

Local availability influences choice of radical treatment for prostate cancer

Jemini Vyas, Oluwatobi Adeyoe, Jenny Branagan, Chandran Tanabalan, Aakash Pai Northampton General hospital, United Kingdom

Introduction: Radical prostatectomy and radiotherapy are both viable options for the treatment of localised prostate cancer. Over the years, medicine has evolved towards a patient-centred approach. Patient decision-making is not motivated by clinical outcomes alone. Geographical location and ease of access to treating clinicians are contributory factors. With the development of robotic surgery, prostatectomy has been centralised into tertiary centres. This has impacted the distances that patients and their families are expected to travel.

Methods: A single centre retrospective study was undertaken, over a five-year period. All patients with localised prostate cancer, undergoing radical radiotherapy or prostatectomy were collected pre-centralisation. This was compared to the total number undergoing these treatments post-centralisation.

Results: Pre-centralisation, both radiotherapy and prostatectomy groups had to travel a median distance of fewer than five miles for treatment. Post-centralisation of pelvic surgery, prostatectomy patients had to travel a median distance of more than 40 miles; whilst the travel distance for the radiotherapy group was unchanged. In the post-centralisation cohort, there was a 63% decline in the number of patients undergoing radical prostatectomy, per month from a mean of 5.1 to 1.9 patients. The radical radiotherapy group had a concurrent 41% increase in patient numbers, with a mean increase from 13.3 to 18.8 patients per month.

Conclusion: The choice of radical treatment in localised prostate cancer is based on multiple factors. This study infers that local availability can influence the choice of radical treatment. It is imperative, that efforts are made to maintain accessibility to all viable options, for prostate cancer patients; to ensure that patient choice is not compromised.

Recent Publications

- 1. Aggarwal A, Han L, Tree A, Lewis D, Roques T, Sangar V, van der Meulen J. Impact of centralization of prostate cancer services on the choice of radical treatment. BJU Int. 2022 Jun 20.
- 2. Parry, M., Sujenthiran, A., Cowling, T., Nossiter, J., Cathcart, P., Clarke, N., Payne, H., Aggarwal, A. and Meulen, J., 2019. Impact of cancer service centralisation on the radical treatment of men with high □risk and locally advanced prostate cancer: A national cross □ sectional analysis in England. International Journal of Cancer, 145(1), pp.40-48.
- 3. Pessoa, R., Maroni, P., Kukreja, J. and Kim, S., 2021. Comparative effectiveness of robotic and open radical prostatectomy. Translational Andrology and Urology, 10(5), pp.2158-2170.

Biography

Jemini Vyas is currently working at Northampton General Hospital as a clinical urology research fellow. She completed her MRCS and studied at Imperial College London and graduated in the year 2015.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 17 July 2022 | Accepted date: 25 July 2022 | Published date: 31 October 2022

Predictive quantitative MDCT models for characterization of renal cell carcinoma subtypes and differentiation from renal oncocytoma: Three phase Nomogram approach analysis

Havtham Shabel

Mansoura University, Egypt

Objective: Our objective is to develop an approach using algorithmic predictive models to discriminate between common solid renal masses, including RCC subtypes and Renal Oncocytoma [RO], using multiphase Computed Tomography [CT].

Methods: We retrospectively analyzed a group of solid renal masses between January 2011 and December 2021 regarding the CT attenuation values using a CT scanner with 64 parallel detector rows and clinical parameters. Inclusion criteria included patients who had four phases of CT with a partial or radical nephrectomy. Exclusion criteria were patients with biphasic or one-phase CT, poor imaging quality, patients under surveillance, radiofrequency ablation, or indeterminate pathology findings as oncocytic tumor variant.

Results: Our results revealed a total number of 467 cases, including 195 masses of Clear RCC [CRCC], 81 masses of RO, 124 masses of Chromophobe RCC [ChRCC], and 67 masses proved to be papillary RCC [PRCC]. There is a significant difference between hypervascular [CRCC and RO] and hypovascular [ChRCC and PRCC] masses, and AUC= 0.95. The predictive model for differentiation between CRCC from RO showed AUC=0.79. At the same time, the discrimination of ChRCC from PRCC showed AUC= 0.94. Nomogram was developed for each phase of analysis.

Conclusion: Using the largest sample to our knowledge, we developed a three-phase nomogram analytical approach to initiate a practical method to discriminate between different solid renal masses that can be used in daily clinical practice.

Recent Publications

- Shebel, Haytham & Farg, Hashim & Kolokythas, Orpheus & El-Diasty, Tarek. (2013). Cysts of the Lower Male Genitourinary Tract: Embryologic and Anatomic Considerations and Differential Diagnosis. Radiographics: a review publication of the Radiological Society of North America, Inc. 33. 1125-1143. 10.1148/rg.334125129.
- Grant, Kinzya & Lindenberg, Liza & Shebel, Haytham & Pang, Yuxi & Agarwal, Harsh & Bernardo, Marcelino & Kurdziel, Karen & Turkbey, Baris & Choyke, Peter. (2013). Functional and molecular imaging of localized and recurrent prostate cancer. European journal of nuclear medicine and molecular imaging. 40. 10.1007/s00259-013-2419-6.
- Shebel, Haytham & Elsayes, Khaled & Abou El Atta, Heba & Elguindy, Yehia & El-Diasty, Tarek. (2012). Genitourinary Schistosomiasis: Life Cycle and Radiologic-Pathologic Findings. Radiographics: a review publication of the Radiological Society of North America, Inc. 32. 1031-46. 10.1148/rg.324115162.

Biography

Haytham Shebel is a radiologist who is interested in body and oncology Imaging and he have special experiences in GU and prostate cancer Imaging and MP-MRI technique. Also, he was certified as International Clinical Researcher from Harvard Medical School in medical research and biostatistics.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 23 August 2022 | Accepted date: 26 August 2022 | Published date: 31 October 2022

Restore renal function in chronic kidney disease by Hydro Pressure Therapy

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Chronic kidney disease is characterized by progressive loss of the renal microvasculature, which leads to local areas of hypoxia and induction of profibrotic responses, scarring and deterioration of renal function [1]. Revascularization alone might be sufficient to restore kidney function in a diseased kidney. For revascularization to be successful the underlying disease process needs to be halted or alleviated and there must remain a sufficient number of surviving nephron units that can serve as a scaffold for the kidney to regenerate [3].

The human body constantly regenerates after damage due to the self-renewing and differentiating properties of its resident stem cells. This natural process of healing replaces young cells having strong stress tolerance for tissue survival, which requires a functional vascular network at site [2]. Despite many recent advances in renal regenerative therapy, Chronic Kidney Disease (CKD) remains a major cause of morbidity and mortality. Whole organ regeneration may be a promising therapeutic approach. The role of a microenvironment in the pathogenesis of kidney disease has largely been undetermined. Microenvironment is a fundamental research topic in the fields of cell biology and regenerative medicine [4].

The possibility of using physical energies to boost regenerative processes has been strongly suggested and embedded in a wide variety of physical stimuli [5]. In renal fibrosis, a toxic microenvironment is unable to regenerate damaged renal tissue to restore kidney function. The use of physical energy in the form of hydrostatic pressure to eliminate renal fibrosis is a new therapeutic approach to restore renal function. A big advantage of hydrostatic pressure is its ability to increase circulation and assist venous return [6].

Pressure exerted by any liquid in a confined space is known as hydrostatic pressure, which acts equally in all directions, by the fluid molecules. When the body is immersed in fluid no movements are required. The urine collected in pelvis after artificial obstruction at pelviureteric junction will create intramural high hydrostatic pressure and helps to resolve renal fibrosis and to improve blood supply and recreates healthy cellular microenvironment which stimulates endogenous stem cells to regenerate hypoxic renal tissue structurally and functionally.

Recent Publications

- Huang, X., Das, R., Patel, A., & Duc Nguyen, T. (2018). Physical Stimulations for Bone and Cartilage Regeneration. Regenerative Engineering and Translational Medicine, 4, 216-237.
- Facchin F, Bianconi E, Canaider S, Basoli V, Biava PM, Ventura C. Tissue Regeneration without Stem Cell Transplantation: Self-Healing Potential from Ancestral Chemistry and Physical Energies. Stem Cells Int. 2018 Jul 3;2018:7412035.
- 3. Singh, M., Berkland, C., & Detamore, M. S. (2008). Strategies and applications for incorporating physical and chemical signal gradients in tissue engineering. Tissue engineering. Part B, Reviews, 14(4), 341–366.

Biography

Shrikant L Kulkarni completed his M.S. (General Surgery) in 1975 from B. J. Medical College Pune, Maharashtra India and his M.B.B.S. was completed at Miraj Medical College. Since 1971 he has worked at several government hospitals like the Wanless Hospital Miraj, Sangli General Hospital Sangli, Sassoon Hospital Pune, and multispecialty hospitals like Ruby Hall Clinic, Pune, and Jahangir Nursing Home. For the last 35-plus years, he is working at his own hospital at Chinchwad. Pune Maharashtra India.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 30 September2022 | Accepted date: 03 October 2022 | Published date: 31 October 2022

Ureteral stents with extraction strings: patient reported outcomes

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Introduction: Short-term ureteric stents are commonly placed after uretroscopy procedures. The removal usually entails having a flexible cystoscopy, which entails a further invasive procedure. There are often delays in removing the stent as departments have limited cystoscopy availability. However, if stents with extraction strings are used, the patient or a clinician can remove it. The aim of the study is to assess the safety and effectiveness of the use of a stent with a string.

Method: A retrospective, single institution study was conducted over a three-month period. 20 consecutive patients had ureteric stent with string insertion. Ten of the patients had a stent removal procedure previously with flexible cystoscopy. A validated questionnaire was used to assess outcomes. Primary outcomes included: dysuria, hematuria, urinary frequency and disturbance of the patient's daily activities. Secondary outcomes included pain experience during the stent removal.

Result: Fifteen patients (75%) experienced hematuria and frequency. Two patients experienced pain and discomfort during the stent removal (10%). Two patients had experienced disturbance in the daily activity (10%). All patients who had stent removal before using flexible cystoscopy preferred the removal of the stent using a string. None of the patients had stent displacement. Median stent dwell time was five days.

Conclusion: Patient reported outcomes measures for the indwelling period of a stent with extraction string are equivalent to the published data on stents. Extraction strings mean that the stent dwell time can be reduced. The removal of stent on extraction strings is more tolerable than the conventional stent.

Item	Percentage
Stent symptoms	75%
Patients prefer stent on string removal	100%
Patient experience disturbance in daily activities	10%

Biography

Rammah Abdlbagi is a urology junior doctor at Northampton General Hospital (United Kingdom). He graduated from Sudan on 22/09/2016 from Alzaem Alzhari university faculty of medicine. He completed full Membership of Royal College of surgeon Edinburgh (MRCSed) on 03/2018.

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Received date: 02 October 2022 | Accepted date: 10 October 2022 | Published date: 31 October 2022

The impact of centralisation on radical prostatectomy outcomes: Our outcomes

Jemini Vyas, Oluwatobi Adeyoe, Jenny Branagan, Chandran Tanabalan, John Beatty, Aakash Pai Northampton General Hospital, United Kingdom

Introduction: The development of robotic surgery has accelerated centralization to tertiary centers, where robotic Radical Prostatectomy (RP) is offered. The purpose of concentrating treatment in high volume, specialist centers is to improve quality of care and patient outcomes. The aim of this study was to assess the impact on clinical outcomes of centralization for locally diagnosed patients undergoing RP.

Methods: Clinical outcomes for 169 consecutive laparoscopic & open RP pre-centralizations were retrospectively compared with 50 consecutive robotic RP conducted over a similar period post-centralization. Preoperative risk stratification and time to surgery were collected. Perioperative outcomes including Length of Stay (LOS) and complications were collated. Post-operative outcomes including Erectile Dysfunction (ED), Biochemical Recurrence (BCR) and urinary continence were assessed.

Results: Preoperative risk stratification showed no difference between the two groups. Median time from diagnosis to treatment was similar between the two groups (pre-centralization, 121 days, post-centralization, 117 days). Mean length of stay (pre-centralisation, 2.1 days, post-centralisation, 1.6 days) showed no significant difference (p=0.073). Proportion of overall complications (pre-centralisation, 11.4%, post-centralisation, 8.7%) and complications, above Clavien-Dindo 2, were similar between the two groups (pre-centralisation1.2%, post-centralisation 2.2%). Post operative functional parameters including continence and ED were comparable. Five-year BCR free rate was 78% for the pre-centralisation group and 79% for the post centralization group.

Conclusion: For our cohort of patients, clinical outcomes have remained static during centralization. It is imperative that centralization is accompanied by increased capacity, streamlining of pathways and training, to ensure that improved quality of care is achieved. Our institution has newly acquired a robot and prospectively studying this data may support the reversal of centralization for RP surgery.

Recent Publications

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- 2. Finkelstein, J., Eckersberger, E., Sadri, H., Taneja, S., Lepor, H. and Djavan, B., 2022. Open Versus Laparoscopic Versus Robot-Assisted Laparoscopic Prostatectomy: The European and US Experience. Reviews in Urology, 12(1), pp.35-43.
- Hamdy, F., Donovan, J., Lane, J., Mason, M., Metcalfe, C., Holding, P., Davis, M., Peters, T., Turner, E., Martin, R., Oxley, J., Robinson, M., Staffurth, J., Walsh, E., Bollina, P., Catto, J., Doble, A., Doherty, A., Gillatt, D., Kockelbergh, R., Kynaston, H., Paul, A., Powell, P., Prescott, S., Rosario, D., Rowe, E. and Neal, D., 2016. 10-Year Outcomes after Monitoring, Surgery, or Radiotherapy for Localized Prostate Cancer. New England Journal of Medicine, 375(15), pp.1415-1424.

Biography

Jemini Vyas is currently working at Northampton General Hospital as a clinical urology research fellow. She completed her MRCS and studied at Imperial College London and graduated in the year 2015.

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Volume 06



Urology and Renal Health

October 25, 2022 | Webinar

Received date: 01 July 2022 | Accepted date: 05 July 2022 | Published date: 31 October 2022

Laparoscopic radical nephrectomy for large renal mass with level I renal vein thrombus

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Introduction and Objectives: Venous involvement develops in 5% to 10% of patients with renal cell carcinoma and is generally considered a relative contraindication to laparoscopic radical nephrectomy. Recent reports have suggested that laparoscopy is feasible option of treatment. However, the procedure may be technically difficult in patients with large renal tumors and in the presence of renal vein thrombus. In this video we present the step by step technique of Laparoscopic radical nephrectomy of a large renal tumour with renal vein thrombus.

Methods: We present a 62 years old male who presented with accidently discovered right renal mass with renal invasion. Her body mass index was 39 kg/m2. Triphasic Computed tomography of the abdomen with renal angiogram revealed an enhanced right renal lower polar mass that measured 10 x 9 X 7 cm compressing the lower and middle calyces with renal vein invasion and patent IVC. Invading renal vein showing dilated lumen distended with enhancing tumoral tissue. The RENAL nephrometry score was 10. The patient had no associated co-morbidities. Laparoscopic radical nephrectomy was done using the four conventional ports 1st one was 10 mm inserted at para rectal line opposite to umbilicus for 30 degree laparoscopy, 5 mm port at mid clavicular line 4 finger breadth below the 1st port, 12 mm port at mid clavicular line 4 finer breadth above the 1st port and the 4th one was inserted at midline just below xiphisternum for usage of needle holder as liver retractor. Dissection started by incision of the posterior peritoneum that was followed medial reflection of the right ascending colon and the duodenum. Then the lower pole of the kidney was mobilized. Dissection of IVC was started at level of lower pole and continued upwards along the medial aspect of the kidney by combining both sharp and blunt dissection. The main renal vein was located upwards behind the liver. Two renal arteries were found being located posterior and below the renal vein, they were dissected then clipped by the Hem-O-Lock and divided by LigaSureTM. Then the main renal vein was dissected to be free of surrounding, vascular tape was used for milking of renal thrombus toward the kidney and away from IVC gate, until there was a good stump for usage of Endo GIA vascular stapler (Echelon Flex 35 ETHICON) for division of renal vein including the thrombus. Then the ureter was divided by LigaSureTM. Enblock dissection of the kidney with the tumor was done using both sharp and blunt dissection. The specimen was entrapped in custom-made bag and the site of insertion of the 5-mm port was extended through which the specimen was extracted.

Results: The operative time was 83 minutes. Blood loss was 100 c.c. There were no intraoperative or postoperative complications. The skin incision after retrieval of the specimen was 6 cm. Hospital stay was 2 days. Visual analogue pain scale at discharge was 2. Histopathology confirmed the diagnosis of clear cell renal cell carcinoma PT2bG3, occluded renal vein by tumor thrombus with free safety margins. The specimen size measured 17x12x7 cm while tumor size measured 11x10.5x5 cm

Conclusions: Laparoscopic radical nephrectomy is feasible and safe option for treatment of large renal tumors with renal vein thrombus. Although technically difficult, the procedure has low morbidity and high patient satisfaction.

Recent Publications

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Biography

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Urology and Renal Health

October 25, 2022 | Webinar







Urology and Renal Health

October 25, 2022 | Webinar

Received date: 25 June 2022 | Accepted date: 30 June 2022 | Published date: 31 October 2022

Urinary bladder pheochromocytoma managed by TURBT

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Introduction: Urinary bladder Pheochromocytomas (bladder paraganglioma) are exceedingly rare tumors accounting for less than 1% of extra adrenal pheochromocytomas and less than 0.05% of all bladder tumours. It is a catecholamine-secreting tumour of chromaffin cells and can arise anywhere in the genitourinary tract with the urinary bladder is the most common site (1). Although it could be totally asymptomatic, patients often present with headache, hypertension, palpitation, sweating, fainting or blurring of vision immediately after voiding (1, 2). Painless hematuria also is common (2). Most bladder Pheochromocytomas are benign. Only 10% of Pheochromocytomas are malignant and diagnosed according to the clinical behaviour; the presence of local recurrence or metastatic disease. Treatment is usually by open partial cystectomy. TURT is possible but has a high risk of hypertensive crisis due to catecholamine over secretion during resection. In this case report we will discuss a case of pheochromocytoma presented with obstructive urinary symptoms and treated successfully by TURT.

Case report: A 62 year old male smoker not known to have any medical illness was referred to our urology clinic at Prince Hamza Hospital (PHH) complaining of obstructive urinary symptoms mainly poor stream, hesitancy and straining. Physical exam was unremarkable, PSA total was 2.5 mg/dl, his urea and creatinine was normal. Urinary tract ultrasound was done and showed a large bladder mass originating from the anterior wall of the urinary bladder measuring 4.3 *3.5 cm with post void residual of 120cc. Uroflowmetrey Q max was 9 ml/sec. CT scan and MRI showed multilobulated mass originating from anterior bladder wall(figure 1). During cystoscopy, a large bladder mass was seen originating from the anterior wall of the bladder protruding toward the bladder neck which explains the patient's symptoms. Pre operatively and during the diagnostic cystoscopy his blood pressure was within normal values around 120\80. Decision was made to go for transurethral resection of tumor (TURT). Early during the resection his blood pressure started to rise up to 220/120 so the procedure was held. Post operatively his blood pressure was observed for 24 hours and was normal. Nephrology consult was requested regarding the rise in blood pressure. He had no abnormal readings during post-operative period. On discharge, patient was asked to monitor his blood pressure regularly. No High readings were recorded. Histopathology report mistakenly showed transitional cell carcinoma of the bladder. Second stage TURT was planned 4 weeks later after proper cardiology consultation. During the second TURT hypertensive crisis happened again shortly after starting resection. The procedure was held. Histopathology this time revealed pheochromocytoma (paraganglioma). Biochemical workup was done which showed increased level of urinary metanephrine .TURT was planned for the third time. In order to complete the resection, preoperative preparation with alpha and beta antagonists 2 weeks before TURT were prescribed (doxazocin 4 mg once daily and bisoprolol 2.5 mg once daily). On the 3rd session of TURT, complete resection was done as shown in (figure 2) without any rise in his BP intraoperatively. In the Postoperative period the patient was doing well, all of his symptoms improved dramatically, and has no rise in his blood pressure. Urinary and plasma metanephrine level were done 2 weeks, 6 months, and 1 year after complete resection and were normal. Follow up biphasic CT scan at 9 months showed completely normal bladder with no recurrence (figure 3). Cystoscopy 1 year after resection showed normal bladder walls with no recurrence.

Discussion and review of literature: Correct preoperative identification of bladder Pheochromocytomas is important. Unsuspected bladder Pheochromocytomas may result in intraoperative hypertensive crises and greatly increase the perioperative mortality forcing the surgeon to terminate cystoscopic tumor resection (3). preoperative stabilization of hypertension strategy is necessary as in other pheochromocytomas with α -blockade using phenoxybenzamine. β -Blockade may be added



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to counteract the rebound tachycardia. Certain patients may require calcium channel blockers such as Nifedipine to maintain adequate control (1). However, due to its rarity compared to urothelial carcinoma. Urologists usually do not put it in differential diagnoses when dealing with bladder mass. Ultrasonography (USG), Computed tomography (CT) magnetic resonance imaging MRI and Metaiodobenzylguanidine (MIBG) scintigraphy are imaging modalities used for the diagnosis of urinary bladder Pheochromocytomas. While urothelial carcinoma is a hypovascular lesion, bladder Pheochromocytomas should always be considered when a hypervascular lesions seen in the bladder by enhanced CT scan (4). Sudden increase of catecholamine release during micturition is responsible for characteristic symptoms of sharp headache, hypertension, palpitation, sweating, fainting or blurring of vision immediately after voiding (1). About one forth of urinary bladder Pheochromocytomas are non-functional. Painless hematuria has been seen in 50-60% (3). Our patient has completely different presentation of obstructive urinary symptoms without hematuria or adreno-sympathetic symptoms during micturation. Patients cure best achieved by surgery, the most common surgical procedure performed for bladder Pheochromocytomas is Partial cystectomy. Laparoscopic excision also reported for many cases with bladder Pheochromocytomas. Radical cystectomy with pelvic lymph nodal dissection is the procedure of choice for malignant disease (1). About 20% of published cases that where localized or locally advanced treated by TURT.

Pathologist may misdiagnose bladder Pheochromocytomas as urothelial cancer, The major histologic features that led to misdiagnosis included a diffuse growth pattern, focal clear cells, necrosis, and frequent involvement of the muscularis propria, with significant cautery artifact compounding the diagnostic problems, some pathologists fail to include Pheochromocytomas in their differential diagnosis when evaluating a bladder tumor (5). Since bladder pheochromocytomas may be malignant, patients should receive longterm follow up after initial surgery. Life-long follow up with annual determination of catecholamine production is required because of late endocrinal manifestations and metastasis in this tumor (5).

Conclusion: Single or multiple stages TURT is feasible option for treatment of bladder pheochromocytoma. Sudden rise of blood pressure during TURT for bladder mass should raise the suspicion of bladder pheochromocytoma. Preoperative alpha and B blocker 2 weeks before the surgery is mandatory to prevent intraoperative hypertensive crisis during resection. Long term follow up after complete resection is advised.

Keywords: Bladder pheochromocytoma; Paraganglioma; Extra-adrenal

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Biography

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Urology and Renal Health

October 25, 2022 | Webinar







Urology and Renal Health

October 25, 2022 | Webinar

Received Date: 13 October 2022| Accepted date: 15 October 2022| Published date: 31 October 2022

Prevention of the catheter-associated urinary tract infection (cauti)

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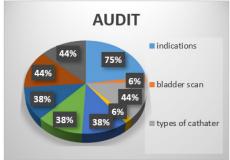
Introduction: Catheter-Associated Urinary Tract Infections (CAUTI) is the major cause of hospital acquired Urinary Tract Infections (UTIs) and it accounts for (59%-86%). [1] Some of these patients eventually develop severe infections such as septicemia and pyelonephritis. For that reason, urinary catheters should be avoided until and unless there are clear clinical indications. These catheters ought to be removed as soon as no longer medical indications. [2]

Aim: The aim of this study was to compare our clinical practice with the guidelines suggested in the 'care bundle' approach developed by the USA Institute of Healthcare improvement and the United Kingdom department of health in order to reduce the incidence of CAUTIS.

Methods: The data was collected in June 2022 and was re audited in September 2022 after the intervention. Interventions included displaying the poster in the wards and conducting short teaching sessions in different wards to make the health care workers aware of the issue.

Findings: The overall results showed an improvement in order to following the guidelines. The documentation record showing the reasons for inserting per urethral catheterisation was increased to 94% from 75% as compared to 12% improvement in documentation of types of catheter chosen. Similarly, a significant improvement is noted performing bladder scan if needed prior to inserting per urethral catheter from 6% to 89%. In addition, the data for daily monitoring of urinary catheter hygiene showed an overall improvement including maintaining daily hygiene, catheter tube properly secured, drainage bag adequately secured and changed every seven days; and to document whether urinary catheter still needed at 23%, 51%, 39% and 45% respectively.

Conclusion and recommendation: CAUTI are associated with significant number of hospital admissions and preventing them is an important step minimising the hospitalisation stay which ultimately is beneficial for overall patient's health and minimising impact on the health care budget. Teaching sessions could be arranged to familiarizing healthcare workers regarding techniques and the preventative measures based on the current guidelines.





Recent Publications





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 Meddings, Jennifer A et al. "Effect of nonpayment for hospital-acquired, catheter-associated urinary tract infection: a statewide analysis." Annals of internal medicine vol. 157,5 (2012): 305-12.

Biography

Zafar Iqbal is an author of a number of publications including case reports, review articles, meta-analyses, and quality improvement projects. He is currently working in the United Kingdom and aiming for taking part in further publications based on improving the quality of care for patients. He has also presented his projects in local as well as in international conferences.

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Urology and Renal Health

October 25, 2022 | Webinar

Received Date: 13 October 2022 | Accepted date: 15 October 2022 | Published date: 31 October 2022

A qualitative analysis of the impact of Carboplatin AUC 10 on physical, work functioning and bone marrow toxicity among Seminoma patients- A single centre experience

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Background: We studied the efficacy, safety and tolerability of dose dense Carboplatin AUC10 chemotherapy and explored the HRQoL (Health-Related Quality of Life) in metastatic seminoma patients receiving this regimen.

Methods: 46 patients with metastatic seminoma treated with Carboplatin AUC10 were identified in our centre. Carboplatin dosing at AUC 10 was used and calculated based on the Calvert formula and EDTA clearance. Treatment was administered as a single dose every 21 days for 3 or 4 cycles. Response to treatment was determined by radiological imaging and serum tumour markers. Toxicities were evaluated using the Common Terminology Criteria for Adverse Events (CTCAE) Version 4.0. Quality of Life (QOL) and long-term treatment related toxicities were assessed post treatment using a self-designed telephonic questionnaire consisting of 4 questions about toxicity, which included- hair loss, hearing impairment, day's absence from work and neuropathy.

Results: Clinical characteristics are as follows: median age was 44 (range 26-77), 44 patients had stage II and 2 had stage III seminoma; average dose of carboplatin administered was 1240mg per cycle (620mg/m2). 4.3% patients received 2, 87% 3 and 8.7% 4 cycles of chemotherapy. 93% of patients achieved a Complete Remission (CR), 4 (all stage IIC) patients required a fourth cycle of chemotherapy, two undergoing RPLND and two watchful waiting. There was no disease relapse at median follow-up of 27.5 (range 4-84) months. 13 patients (28%) experienced grade 3 and 2 (4%) grade 4 neutropenia, thirteen (28%) grade 3/4 thrombocytopenia, Nine (19.5%) patients required prophylactic filgrastim. Commonest non-haematological toxicities were fatigue in 28 (50%) and nausea 14 (28%) patients. QOL data was available for 35/46 (76%) of patients. 40/46 (87%) patients had no residual tinnitus. One patient had residual grade 1 peripheral neuropathy. Eight patients continued to work throughout treatment, 16(45%) patients took <5 days off work during chemotherapy, 4 patients took between 5 to 21 days, 13 more than 21 days and two were retired.

Keywords: Testicular cancer, Carboplatin, AUC10, Toxicity, HRQOL.

Recent Publications

 Meddings, Jennifer A et al. "Effect of nonpayment for hospital-acquired, catheter-associated urinary tract infection: a statewide analysis." Annals of internal medicine vol. 157,5 (2012): 305-12.

Biography

Subodh Kamble is a Urologist, Uro-Onco, and Robotic Surgeon doctor at Sanjeevani Multispecialty Hospital Vesu Surat. He graduated from India from Shah Mahavir Super Speciality Hospital. He completed his masters in the United Kingdom from the University of Edinburgh.

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October 25, 2022 | Webinar







Urology and Renal Health

October 25, 2022 | Webinar

Received date:15 July 2022 | Accepted date:21 July 2022 | Published date: 31 October 2022

Robotic Assisted Partial Nephrectomy (RAPN): How can we guarantee renal function preservation?

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Introduction: Nephron-sparing surgery is favoured for T1 or suitable T2 renal tumours if surgically viable with the goal to preserve renal function while maintaining desired oncological outcomes. We review whether we can identify any peri-operative factors that can significantly impact post-operative renal function.

Methods: A Retrospective analysis of all patients who underwent RAPN at a single tertiary referral centre since December 2015 until October 2021. Data analysed includes demographics and co-morbidities (age, ethnicity, BMI, hypertension, diabetes, solitary kidney) which are known to impact renal function post PN. Renal function pre-operatively and post-operatively >30 days, tumour characteristics (nephrometry score), intra-operative (warm ischaemic time, blood loss, operative time), and postoperative (length of stay, transfusion rate and Clavien Dindo (CD) complications. 3 groups were identified: Group 1= no acute kidney injury (AKI), Group 2 = AKI that resolved, Group 3= AKI that didn't resolve. Group 1 and 2 were compared with Group 3.

Results: 103 patients underwent RAPN. 19 were excluded (converted to radical nephrectomy n=3, insufficient renal function data =16). Group 1+2 (n=62) and Group 3 (n=22) were matched for age, gender, ethnicity, BMI, performance status and ASA grade, co-morbidities, intraoperative warm ischaemic time, blood loss, blood transfusion, operative time, and length of stay. Group 3 had a statistically higher nephrometry score (p-value =0.0064) and CD (p-value = 0.00046).

Conclusion: Patients with higher nephrometry scores and complications are statistically more likely to have worse renal function outcomes. We did not demonstrate any significant pre- or post-operative factors in our single centre. The further multi-centre analysis would be needed to confirm this.

Recent Publications

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Urology and Renal Health

October 25, 2022 | Webinar

Received date:10 July 2022 | Accepted date:16 July 2022 | Published date: 31 October 2022

Findings in a metrological analysis of strips-test use in diabetes home-care control: a confirmation

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Recently a study by this author has been published [1] about critical inconsistencies affecting this extremely extended type of control in home care. It was shown that basically the tests could be false or inconclusive due to insufficient rules of normalization governing this kind of test. In particular, the meaning of the advised (marginal) use of "control solutions" is mistaken, by being considered only a qualitative check of the tester readings, with no correlation with the capillary-blood glucose-level measured values. Instead, according to basic standard rules governing the field of testing, that control solution has to be considered a "reference material", and consequently the way to check the calibration of the testers—whose re-calibration should then be allowed when necessary (a feature presently not allowed). The previous study was conducted on 4 popular testers (among the dozens existing) and their strips for the pre-diabetes range only. Now an additional semi-professional one has been used for the same purpose, on the same patient—note that this study directly concerns the quality of the instruments, the testers, not the measurement on the glucose level in capillary blood of a population of patients.

A one-year use of the new tester showed a quite different situation of consistent readings, based on an off-shelf correct calibration of the tester—persisting during the tests' full period. The previous ones, sparingly checked again with their respective strips, confirmed (a) their off-calibration condition in most cases, (b) the validity of the suggested method for recovering the calibration, and (c) the urgent need for an ISO specific normalization of the control-solution features and use. After a short recall of the previous findings, the paper compares them to new ones and discusses the resulting metrological/testing (and some clinical) consequences, also by comparing this study with previous ones in the literature.

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October 25, 2022 | Webinar

Received date: 14 July 2022 | Accepted date: 20 July 2022 | Published date: 31 October, 2022

Types of hormone therapy for prostate cancer

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There are two main types of hormone therapy for prostate cancer: The body stops producing hormones and no longer allows them to be produced. The body prevents the binding of hormone receptors to cells. Some doctors begin treating both types to create a complete case of androgen blocking the effects of androgen on cancer cells. LHRH is a chemical that stops the production of testosterone in a patient's testicles; similar to orchiectomy, these materials can also be used in reverse. The patient should be injected once every 4 months. Or use subcutaneous tablets once a year. Side effects include:

Lack of sexual desire in relation to the husbandBreast augmentation in men | Loss of muscle mass | Sudden weight gain | Fatigue and boredom

Since it usually causes allergic reactions with severe symptoms, it is not often used at this time.

How to choose the right treatment?

It usually begins with the antibacterial hormone LHRH. Sometimes your doctor will also prescribe an anti-androgen to the patient. Doctors disagree about starting treatment early to prioritize the patient, some believe it should be treated immediately after diagnosis, and some believe it is useless.

Why is hormonal therapy used for prostate cancer?

Several types of hormone therapy may be used to treat prostate cancer. Hormone therapy for prostate cancer to lower testicular androgen levels Androgen deprivation therapy, also called ADT, uses surgery or medications to lower the levels of androgens made in the testicles. Hormone therapy for prostate cancer with LHRH agonists: LHRH agonists (also called LHRH analogues or GnRH agonists) are drugs that reduce the amount of testosterone made by the testicles. Treatment with these medications is sometimes called medical castration because they lower androgen levels just like orchiectomy.

Although LHRH agonists cost more than orchiectomy and require frequent medical visits, most men choose this method. With these medications, the testicles stay in place, but they will shrink over time and may become too small for you to feel. LHRH agonists are injected or placed as small implants under the skin. Depending on the medication used, they are given anywhere from once a month to once a year. LHRH agonists available in the United States include:

Leuprolide (Lupron, Eligard) | Goserelin (Zoladex) | Triptorelin (Trilstar) | Histrelin (Vanta)

When LHRH agonists are first given, testosterone levels rise for a brief period before dropping to very low levels. This effect is called a flare and is caused by the complex way these drugs work. Men whose cancer has spread to the bones may experience bone pain. Men who have not had their prostate gland removed may have difficulty urinating. If cancer has spread to the spine, even a short-term increase in tumor growth as a result of a flare can compress the spinal cord and cause pain or paralysis. Flares





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can be avoided by giving medicines called anti-androgens (described below) for a few weeks when starting treatment with LHRH agonists. This medication is used to treat advanced prostate cancer. It is given as a monthly injection under the skin. The most common side effect is problems at the injection site (pain, redness, and swelling).

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 20 June 2022 | Accepted date: 25 June 2022 | Published date: 31 October 2022

Simultaneous Bilateral Endoscopic Surgery (SBES) for patients with bilateral upper tract Urolithiasis

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Urolithiasis is a common health disorder in the Western World with a lifetime risk of stone formation as high as 10–12% in males and 6–8% in females, and the prevalence of stone disease is on the rise over the past two decades. Similarly, also the incidence of bilateral renal stones is not negligible—recent studies have shown that up to 15% of patients with urolithiasis will have bilateral renal stones. It has been demonstrated that bilateral same-session endourological procedures for stones are effective in terms of both efficacy (i.e., Stone-Free Rate or SFR) and safety. Moreover, same-session bilateral procedures for nephrolithiasis are associated with several advantages, including single anesthetic exposure for the patient, shorter cumulative hospitalization time, fewer days out of work, decreased patient radiation exposure, and greater overall cost effectiveness.

Historically, same-session bilateral procedures have been performed by the surgeon first completing the treatment on one side and then completing the treatment on the other side—that is, treating the stones in the right ureter and/or kidney first, and then proceeding with treatment of the left ureter and/or kidney or vice versa. However, a potentially more efficient treatment option is Simultaneous Bilateral Endoscopic Surgery (SBES), which entails at least two surgeons working simultaneously, each treating one kidney or ureter as opposed to treating one kidney after the other. Potential advantages would include improvements in efficiency—treatment of both renal units with shorter anesthetic time and also a decrease in the total number of procedures that a given patient may require.

The procedure is then started by the ureteroscopic surgeon: through a flexible cystoscope, a guidewire is placed into the renal pelvis of the kidney in which PCNL is performed. A ureteral occlusion balloon is subsequently placed and positioned after retrograde pyelography. At this point, the ureteroscopic surgeon can begin the fURS procedure on the contralateral side, while the PCNL surgeon will begin the PCNL. The surgeons work simultaneously during the procedure and the fluoroscopic c-arm is shared by the two surgeons—each using the c-arm when needed.

PCNL approach during SBES. PCNL is performed using 24 Fr or 17.5 Fr percutaneous tract, a rigid nephroscope and either ultrasonic/pneumatic lithotripsy or holmium laser lithotripsy, and basket extraction. Dilatation of the tract is performed using either a balloon or metallic dilatator. At the end of every PCNL procedure, flexible nephroscopy is performed in addition to fluoroscopic evaluation to ensure that all stones have been removed. A double-J stent is left for drainage at the end of each PCNL. Successful performance of SBES should in theory magnify the advantages of same-session bilateral surgery, as both procedures can be accomplished at the same time (i.e., one kidney does not have to wait until the other is stone free), further shortening operative and anesthetic times. Recently, reports have described the SBES approach to both kidneys for the treatment of renal calculi, showing favorable outcomes in terms of SFR and complication rates without an increased risk of the development of acute renal failure or other complications. Ideal candidates to SBES are patients bearing bilateral small- to medium-size stones who have a high chance to become stone free and, as a consequence, are unlikely to undergo a second surgery.

It is noteworthy that SBES requires a special OR setup, a complete endourological armamentarium, and dedicated nurses in order to allow both surgeons to work simultaneously and efficiently. Specialized equipment includes two endoscopic towers (one for





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each surgeon to view the kidney that each is operating on) There are several potential advantages to performing SBES in lieu of staged procedures or even same-session bilateral procedures. Most importantly, anesthesia time may be decreased significantly by having both renal units operated on at the same time.

In addition, shorter operative time may limit the decrease in core body temperature that is seen during endourological surgery when abundant irrigation is used. This may, in turn, decrease the risk of postoperative shivering and prolong recovery time due to hypothermia. Moreover, SBES reduces the overall operative time com- pared with a single-session bilateral procedure and/or staged surgeries. In recent years, same-session bilateral endoscopic surgery has been shown to be safe and effective, for both fURS and PCNL procedures. Potential advantages of same-session surgery include less anesthetic exposure for the patient as well as the need for fewer procedures to achieve stone clearance.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 30 June 2022 | Accepted date: 05 July 2022 | Published date: 31 October 2022

Determination of the density of kidney stones according to their chemical composition

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Introduction: The prevention of recurrence of renal calculi is important for the treatment, both surgical and medical, of renal lithiasis. Computed tomography to diagnose and infrared spectroscopy to determine the chemical composition of the stones are used to make a comparison of these results; by submitting them to both studies we will create a database, this will be practical and useful since it will corroborate the hypothesis put forward that the average density of urinary stones depends on their chemical composition [1].

Main objective of the study: To determine the density of urinary calculi using computed tomography and compare it with the chemical composition of urinary calculi obtained by infrared spectroscopy; to compare both results and create a database of the mean density of urinary calculi and their chemical composition.

Material and methods: analytical cross-sectional descriptive study of patients with kidney stones surgically intervened by percutaneous nephrolithotomy at the Hospital "Valentín Gómez Farías" of the ISSSTE in the period from February 1, 2019 to October 31, 2019. The sample size was non-probabilistic by consecutive cases, using conventional computed tomography with a sensitivity and specificity close to 95% and infrared spectroscopy as study instruments.

Results: We performed tomographic density analysis and chemical analysis by spectroscopy of 40 samples of kidney stones obtained by percutaneous nephrolithotripsy in a period ranging from March 4 to September 9, 2019, the density analysis was performed by a single radiologist and chemical analysis by spectroscopy in the laboratory of Physics and Basic Sciences of the University of Guadalajara by the same team, 19 (47.5%) male patients and 21 (52.5%) female patients. The 4 predominant components were uric acid (UA) (21 cases), mean value 408.095 HU (284.391-531.8 HU); uric acid with calcium oxalate (UA OC) (5 cases) mean value 1090.8 HU (837. 281-1344.32UH); calcium oxalate (OC) (11 cases) mean value 1227.0 UH (1056.08-1397.92UH); calcium oxalate with struvite (OC U) (1 case) with mean value 1575.0 UH (1008.11-2141.89),[2].

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 26 August 2022 | Accepted date: 27 August 2022 | Published date: 31 October 2022

Penile Fracture (Blunt Penile Injury); Etiology, Diagnose, and Treatment

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Introduction: Penile fracture is a urologic emergency that has psychological and functional consequences. Penile Fracture is a traumatic lesion of tunica albuginea and corporeal structures of the penis. Blunt injury of the penis leads to rupture of tunica albuginea which covers the corpus cavernous. This injury occurs mostly during aggressive masturbation, Taqaandan event, kneading penis to achieve detumescence, and rolling over in bed.

Incidence: The incidence of PF is 0.29-1.36/100.000 in Western countries and North America. There are about 1600 cases in the medical literature between the years 1935-2001. The feeling of shame and fear avoid people to see their doctors. Late complications such as erectile dysfunction and penile curvature fibrosis bring patients to urologists.

Findings and Diagnose: There are some difficulties to gather anamnesis of the patient because of some feelings. Patients talk about the "crackle" sound during the kink of the penis. After the penile fracture, there would be rapid and acute swelling and pain subcutaneous bleeding. If Buck fascia is solid that leads to "eggplant deformity". On the other hand, if Buck's fascia has been damaged, extravasation will reach "Colles" fascia. There will be a palpable, solid hematoma. Other complications are urethral rupture, dorsal artery injury, and dorsal nerve injuries. Retrograde Urethrography is reliable in doubtful cases. Nowadays, Cavernosography, and MRI has not been chosen by doctors. Penile Doppler is more suitable for such cases.

Treatment: If the corpus cavernosum is solid and the patient does not want surgical intervention, conservative and local treatments would be a choice. The most appropriate decision is the surgical method. Incision of Buck's fascia, draining of hematoma, finding rupture, suturing laceration with 3/0 or 4/0 polylactic acid (Vicryl) or polyglycolic acid (Dexon), suturing Buck's fascia longitudinally, closing penile skin and dressing of penis are steps of surgery.

Conclusion: Penile Fracture is a true urologic emergency that needs urological consultation. Penile manipulations and geographic traditions can cause this injury. Anamnesis of a patient, physical examination of the penis, and if necessary Penile Doppler can give us a direct route for these cases. For avoiding late complications patient undergoes surgical intervention. Exploration is the best incision technique that has cosmetic advantages. Penile Fracture has psycho-social trauma effects on patients.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 18 July 2022 | Accepted date: 25 July 2022 | Published date: 31 October 2022

Prevalence of early stage Chronic Kdney Disease in diabetic and hypertensive patients in a tertiary care hospital, northern Ethiopia: A Point-of-Care screening in resource limited setting

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Background: Diabetes and hypertension are primary risk factors for Chronic Kidney Disease (CKD). Therapeutic interventions are most likely to be effective if they are implemented early in the course of the disease process. Due to unavailability of screening strategies, there is no previous study on the prevalence of early stage CKD in high risk populations in resource limited setting, including northern Ethiopia. This study aims to assess the prevalence of early stage CKD and associated factors among diabetic and hypertensive patients using a point of care screening in a tertiary care hospital, Northern Ethiopia.

Method: a hospital-based cross-sectional study design was employed to consecutively sample hypertensive and diabetes mellitus adult (aged >18years) patients visiting Ayder comprehensive specialized Hospital from February 1- 30 March, 2020. Data was collected by interview and from CKD screening test results. Each patient provided a urine sample for albuminuria and a blood sample for creatinine level. Estimated Glomerular Filtration Rate (GFR) was calculated using CKD epidemiology collaboration (CKD-EPI) equation. A bivariate and multivariable logistic regression model was used to assess associated risk factors. P-value <0.05 and 95% confidence interval were considered statistically significant.

Results: a total of 512 (243 hypertensive and 259 diabetic) patients were included in the study. Two-third of these patients (n=343) had microalbuminuria and 17% (n=85) had macroalbuminuria. About 15% (n = 78) of the study participants had an estimated GFR of <60ml/min/1.73m2. Being diabetic was 3.8 times (P-value: <0.001; 95% CI: 1.83, 7.82), and being both diabetic and hypertensive was 5.4 times (p-value: 0.001; 95% CI: 2.09, 14.10) at higher risk of developing early stage CKD than that of only hypertensive patients.

Conclusion and recommendation: A significant proportion of diabetic and hypertensive patients attending follow up in northern Ethiopia developed early stage CKD. Being diabetic and combination of both diabetes and hypertension were independent predictors for developing early stage CKD. More diagnostic resources and implementation of regular point -of -care screening for CKD among high risk patients are of paramount importance for early detection and treatment to halt the progression of the disease.

Key words: point of care screening, early chronic kidney disease, albumin to creatinine ratio, albuminuria, glomerular filtration rate, diabetes mellitus, hypertension, Ethiopia

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 18 July 2022 | Accepted date: 25 July 2022 | Published date: 31 October 2022

Complications of 302 Laparoscopic Renal Surgeries

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Introduction: Laparoscopic surgery is gold standard in the treatment of different kidney pathologies. The aim of the present work is to analyse the postoperative complications of renal laparoscopic surgeries using the Clavien-Dindo classification.

Material and Methods: An observational study was carried out using our prospective database (Sanatorio Allende, Argentina). We Analysed all consecutive laparoscopic renal surgeries performed at our institution in which treatment or approach of the renal pedicle was performed. Postoperative complications up to 90 days after surgery were considered.

Results: A total of 302 laparoscopic renal surgeries involving the renal pedicle were performed. 49.7% were radical nephrectomies, 32.8% partial nephrectomies, 11.6% simple nephrectomies, 4.6% nephroureterectomies, and 4 patients (1.3%) were kidney donors. A total of 221 patients (73.2%) had a postoperative course without complications (Clavien 0), 75 patients (24.8%) suffered minor complications (Clavien I and II) and 6 patients (2%) had major complications. Of the Clavien 2 patients, 72% were transfused or used antibiotics to treat infection. Among the major complications, 3 type IIIa were recorded: a ureteral stent placement due to urinoma, an arteriovenous fistula and a pseudoaneurysm treated in hemodynamics (all three in partial nephrectomies). We had one IIIb (reintervention for bleeding after radical nephrectomy) and two IVa: one heart pump failure and one respiratory failure. In a total of 6 patients (2%), laparoscopic surgery was converted to conventional open surgery due to technical difficulty or bleeding (5 radical and 1 simple). Two radical nephrectomies and one nephroureterectomy were converted to "hand-assisted laparoscopic" technique, while two partial nephrectomies were converted to laparoscopic radical nephrectomy. Thirteen patients (4%) received a total of 29 unit red blood cell transfusions. The overall complication rate was 26.8%, while in radical nephrectomies it was 24%, in partial and simple nephrectomies it was 28%, in nephroureterectomies 36% and in donors 25%.

Conclusion: Complications in our series were predominantly minor and we consider laparoscopic renal surgery to be a safe technique in our environment.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 19 July 2022 | Accepted date: 25 July 2022 | Published date: 31 October 2022

Chemical composition, antioxidant potentials, and calcium oxalate anticrystallization activity of polyphenol and saponin fractions from *Argania spinosa* L. press cake

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Argania Spinosa (L.) press cake possesses a wide range of biological activities, as well as a powerful therapeutic and preventive effect against chronic diseases. The goal of this study is to valorize the anti-crystallization properties against calcium oxalate crystals of Argania Spinosa (L.) press cake fractions as well as identifying its bioactive components. Chemical species identification was done using GC-MS analysis. The turbidimetric model was used to investigate crystallization inhibition in vitro. Fourier Transform Infrared Spectroscopy was used to characterize the synthesized crystals. Furthermore, both DPPH and FRAP methods were used to assess antioxidant activity. The results show that the fractions are equally important in the inhibition percentages of calcium oxalate crystallization. For the saponin and polyphenol fractions, the inhibition percentages are in the order of 83.49 % and 82.83% respectively. The results of the antioxidant activity by DPPH method show that the two fractions are equally important in the elimination of free radicals; the inhibition percentages were 77.87±4.21 and 89.92±1.39 for both polyphenols and saponins, respectively. FRAP method showed that the absorbance increases correlatively as a function of the concentration and the values are almost similar for both fractions and reaches maximum values in the order of 0.52±0.07 and 0.42±0.03 respectively for saponins and polyphenols. These findings demonstrate that both fractions are rich in bioactive chemicals and have an anti-crystallization capacity, allowing them to be employed in the treatment and/or prevention of stone formation.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 19 July 2022 | Accepted date: 25 July 2022 | Published date: 31 October 2022

Opportunities for early detection of prostate cancer in young men

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Introduction: Prostate Cancer (PCa) is a public health problem; it ranks second in incidence in 105 countries and fifth among causes of death in 46 countries. PCa is sometimes verified in men younger 50 years of age, including the metastatic stage. Common methods for diagnosing PCa are not always accurate, the algorithm has not been finalized.

Materials and methods: We studied data on the epidemiology and prevalence of PCa in men aged 40-50 years (PubMed, CrossRef and Scopus databases), having obtained data on the probable causal relationship of factors influencing the development of PCa. Also, we perform an IHC-study on 10 PCa samples of patients 40-51 y.o. in tumor stages pT1cN0M0-pT2cN0M0 after radical surgical treatment in one clinic (Sechenov Medical University) in 2016-2019. The preoperative PSA (3.5-9.86 ng/ml) and malignancy criteria parameters (4 - ISUP-1, 4 - ISUP-2, 2 - ISUP-3) were studied. All patients underwent RARP, without technical features and postoperative complications. The study was carried out as part of a joint research program of two Russian state medical universitiest.

Results: When the preparations were reviewed by a third-party morphologist, the tumor in the apex of the gland was absent only in 1 case (10%), the tumor in both lobes of the gland were present in all, without perineural lymphovascular invasion and urethral lesions. A positive margin of surgical resection was noted in 1 case (0.2 cm). Due to IHC, it was found that Ki-67 was detected in 1-5% of samples, b-catenin – 3 points with membrane staining up to 100%, e-cadherin – from 1 to, maximum, 3 points (pT1cN0M0 ISUP-1). Mutations in EGFR, TP-53 and BCL-2 were not detected. Loss of heterozygosity for BRCA2 was verified in 1 case of pT2cN0M0 ISUP-2, for RB-1 – in 1 pT2aN0M0 ISUP-3, for PTEN – in 2 samples pT2cN0M0, ISUP-1 and ISUP-2.

Conclusion: The diagnosis and treatment of men younger 50 y.o. with PCa are of great medical importance. Hence, that is lack of samplings among young men, as well as the high cost of the proposed genetic studies, which leads to late diagnosis of the tumor. It is planned to compare the obtained results of IHC with the further fate of the observed patients: indicators of the overall and cancer-specific survival, frequency of medical consultations, PSA dynamics, etc., as well as to increase the sample of the group and compare the results with the study of the control's (men over 50 years old). The study of a combination of risk factors for the development of PCa in young patients will allow us to formulate a new diagnostic approach based on personal molecular genetic information.

Keywords: prostate cancer, immunohistochemical study, mutations, cancer screening, young men

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 21 July 2022 | Accepted date: 25 July 2022 | Published date: 31 October 2022

Gut-kidney axis: the role of exercise and symbiotic as a non-Pharmacological aids for patients with Chronic Kidney Disease

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Patients with Chronic Kidney Disease (CKD) experience significant reductions in muscle mass, physical function, individual independence, and overall quality of life. This lower physical function is associated with increased levels of inflammation through the gut-muscle axis, its relationship to tight junctions, and finally dysbiosis. Furthermore, renal failure leads to changes in the intestinal microbiome (Gut-kidney axis) via changes in nutrition and medication, which leads to leakage of bacterial metabolites, in particular uremic toxins into the bloodstream through changes in intestinal barrier properties that all involved in the progress of CKD. In addition, modification in intestinal microbial lines includes enrichment of Eggerthella lenta and depletion in Bacteroides eggerthii, Roseburia faecis, and Prevotella spp. Various therapeutic interventions have proposed to restore the coexistence of the intestinal microbiome which if approved, can remarkably impact the improvement and treatment management of CKD patients. Exercise and nutrition, especially probiotics, are among these interventions. Studies have demonstrated that exercise mediates through, production of the anti-inflammatory metabolites of SCFA (acetate, propionate, and butyrate) via its effect on the gut microbiome and reduces lipopolysaccharides. In addition, several studies have examined the role of symbiotic in renal function. For example, Zhang et al investigated the protective influence of Shenqi Yanshen Formula against CKD and reported that SQYSF significantly reduced the rate of renal fibrosis in CKD mice, and remarkably down-regulated the expressions of inflammatory markers and even has more potential to change the composition in mice's intestinal flora. However, it is worth noting that studies were carried out on animal models and their mechanisms of action are not fully understood. As a result, despite different exercise modalities and microbiome alteration methods, appears that identifying important variables such as consistent and appropriate exercise type, duration, intensity, frequency, and timing alongside the intestinal microbiome enrichment approach in humans is considerably needed.

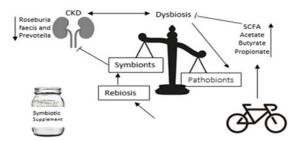


Figure: 1 Interaction between exercise, symbiotic supplement, gut and kidney disease Gut dysbiosis contributes to kidney disease by increasing uremic toxins and alteration of gut microbiome whereas exercise and symbiotic produce more symbionts and Causes intestinal Rebiosis, which in turn decrease level of inflammation.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 08 August 2022 | Accepted date: 15 August 2022 | Published date: 31 October 2022

Atypical presentation of prostatic cancer with left axillary and supraclavicular lymphadenopathy

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Introduction: The burden of prostatic cancer is rising in Sudan. Usually, they present late in their disease with urinary tract obstruction, hematuria, bony pain, or cachexia because there is no screening program. Here we present a patient with prostatic cancer who presented with left axillary mass as his main concern.

Case Description: 82-year-old Sudanese male presented with a left axillary and left supraclavicular lymphadenopathy of a few months' duration. He underwent a decisional biopsy which showed metastatic adenocarcinoma. Upper and lower GI endoscopy were performed but the latter was complicated by a sigmoid perforation with peritonitis. During laparotomy, multiple enlarged pelvic lymph nodes were encountered and a biopsy result suggested a metastatic prostatic neoplasm. Later, prostatic biopsy confirmed the diagnosis. The patient was treated with bilateral orchidectomy.

Clinical discussion: Lymphatic metastasis to axillary lymph nodes is a very rare manifestation of prostate cancer and only a few cases have been reported in the literature. It can cause diagnostic difficulty since prostate cancer typically metastasis to the pelvic lymph node and very rarely involves he supradiaphragmatic lymph node.

Conclusion: Metastatic prostatic carcinoma should be considered among the causes of supra-diaphragmatic lymph adenopathy. Careful physical and imaging examinations combined with PSA and pathological analysis are essential in the diagnosis of advanced prostate cancer with unusual presentation.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 23 July 2022 | Accepted date: 28 July 2022 | Published date: 31 October 2022

Predictive values of overexpression of Ki 67 as prognostic indicators in recurrence of renal tumor after radical nephrectomy

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Background: Managing the recurrence of renal tumor in renal bed without metastasis is surgical challenge for the urologists. The extent of recurrence, size, time and vascular involvement are all the prognostic indicators for overall survival and cancer free survival of renal tumors. Ki 67 is a non-protein histone antigen. The role of over expression of Ki 67 at molecular level is dubious as there has been conflicting results in literature. Department of Urology at Institute of Kidney Diseases is a busy tertiary care hospital dealing with renal tumors.

Objective: To study the predictive value of over expression of Ki 67 in recurrence, tumor free survival and 5 year survival rate in renal tumor

Methods: It is a descriptive study that was conducted in Team C Urology at Institute of Kidney Diseases HMC Peshawar from 2017-June 2021. Total numbers of 8 cases with recurrence of growth were recorded by non-probability consecutive sampling. Resection of the recurrence of tumor bed was performed in all cases. The preoperative, intraoperative and postoperative details were recorded on structured proforma and were analyzed on SPSS.

Results: We have performed 430 radical nephrectomies from 2017 till June 2021. We recorded 8 cases of recurrence of growth in renal bed accounting 1.8 % of total. The mean time to recurrence was 18±3 months (Average 3 months till 4 years). The recurrence was picked during follow up ultrasounds with mean size of recurrence was 8.5±4cm. It was confirmed by CT scan. In Toto excision was successful in 7 cases while 1 patient required Hartsman procedure as tumor had eroded the colon. Out of 8, Chromophobe carcinoma was found in 5 while 3 had clear cell carcinoma. Ki67 was positive in all 5 cases of chromophobe cell carcinoma and 2 cases of clear cell carcinoma. We recorded mortality in 3 patients of chromophobe cell carcinoma and 1 patient of clear cell carcinoma with median follow up of 30 months.

Conclusion: Ki 67 is poor prognostic indicator for recurrence of renal tumor.

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Urology and Renal Health

October 25, 2022 | Webinar

Received date: 4 July 2022 | Accepted date: 10 July 2022 | Published date: 31 October 2022

Can we avoid prostate biopsy in patients with Trifecta (Serum PSA more than 100, DRE positive, Bone scan positive)?

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Purpose: Patients presenting with trifecta of high serum PSA above 100, DRE positive and Bone scan positive, belongs to advanced cancer prostate. Treatment to be followed in such patients is minimally effected by biopsy results. Thus we retrospectively investigated the patients of advanced cancer prostate for whom we did bilateral orchidectomy with prostate biopsy in one sitting at our center. It was seen that patients in whom the above said trifecta was found positive, were all having advanced cancer prostate even in biopsy.

Materials and methods: Around 131 patients who underwent prostatic biopsy with bilateral orchidectomy at our center over a period of last six years were reviewed retrospectively. All of these patients were having trifecta positive (Serum PSA more than 100, Bone scan positive and DRE positive). In all biopsy proven patients positive predictive value and sensitivity and specificity of combined Bone scan positive with DRE positive with serum PSA more than 100 were calculated in view of detecting advanced cancer prostate.

Results: Almost all 131 patients with Trifecta of serum PSA levels above 100, Bone scan positive and DRE positive were having advanced cancer prostate. Biopsy was done at the time of bilateral orchidectomy in all patients.

Conclusion: We suggest possibility of detecting almost all patients with advanced cancer prostate who are having Trifecta of High serum PSA with advanced features in imaging as bone scan and are having DRE positive. In such patients we can easily skip prostatic biopsy early in phase and can move for hormone withdrawal treatment strait away. This proves extremely beneficial for elderly and prevents them from side effects of prostate biopsy.

Key Words: Trifecta Serum PSA more than 100, Bone scan positive, DRE positive

Recent Publications

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Urology and Renal Health

October 25, 2022 | Webinar

Received date:4 July 2022 | Accepted date:10 July 2022 | Published date: 31 October 2022

Efficacy of oral steroids after TURP in reducing incidence of Bladder Neck Stenosis and Urethral stricture

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Objective: TURP is a feasible modality for treatment of BPH. Post TURP Bladder neck stenosis and urethral stricture is a known complication. This study aimed at evaluating the efficacy of oral steroids (Dexamethasone) in reducing the incidence of bladder neck stenosis and urethral strictures post TURP. Up to date no study has evaluated the role of oral steroids after TURP.

Material and Methods: In this case control study, patients undergoing TURP, were divided into two groups according to patients receiving (Group 1) and not receiving (Group 2) oral steroid (Dexamethasone 5mg). Both groups were controlled at 1, 3 and 6 months after catheter removal (usually tenth day after TURP) with uroflowmetry, and the flow rates were statistically compared. Incidence of cases of Bladder neck stenosis and urethral stricture were noted in both groups. Dexamethasone was given from POD one onwards for next ten days till the day of catheter removal.

Results: A total of 418 patients were selected for the study as per inclusion criteria. They were divided into two groups as those receiving (Group 1: Dexamethasone group n= 209) or not receiving (Group 2: n=209). None of the patients in Dexamethasone group had Bladder neck stenosis and urethral stricture.

Conclusion: Oral steroids can be used after TURP to reduce the incidence of Bladder neck stenosis and urethral strictures.

Key words: Dexamethasone, Steroids, stricture, bladder neck stenosis, TURP

Recent Publications

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