

The 6th CJUA annual meeting

2012



China-Japan urological association

PROGRAM & ABSTRACTS

Date

Apr. 23, 2012

Venue

Pan Pacific Yokohama Bay Hotel Tokyu

CJUA Home-page URL: <http://www.uro.jp/nichu/index.html>



PROGRAM of the 6th CJUA annual meeting

(2012.4.23 Yokohama Japan)

Meeting address: Room Prince, Pan Pacific Yokohama Bay Hotel Tokyu

16:00 - 16:10 Opening Address

Prof. Yanqun Na, President of CJUA (China)

16:10 - 16:25 Special lecture

Chairmen: Prof. Kakehi Y , Japan

From Chinese Urologist to a Doctor of Japan: A Journey through Education and Research.

Xiuxian Wu, Kagawa University ,Japan

16:25 - 17:05 Session I (7 minutes presentation following 3minutes discussion)

Chairmen: A.Prof. Shinohara N , Japan
Prof. Xianghua Zhang , China

1) Androgen Ablation Therapy Increases Prostate Cancer Stem Cells via Hedgehog Pathway.

ZHANG Yu-xi, China Medical University, China

2) Oncolytic herpes simplex virus type 1 (HSV-1) armed with IL-12 for treating bladder cancer.

Jiangang Hou, The University of Tokyo ,Japan

3) The functional and transcriptional regulation mechanism of UCA1, a novel bladder-cancer specific long noncoding RNA.

Zhang Zheng , The First Affiliated Hospital of Peking University, China

4) Association Analysis of 14 Single Nucleotide Polymorphisms with Prostate Cancer

Risk in Chinese Subjects.

Lei Wang, Peking University Wujieping Urology Center, China

17:05 - 17:55 Session II (7 minutes presentation following 3minutes discussion)

Chairmen: Prof. Nagai A, Japan

Prof. Xu Kexing, China

5) Clinical Research of Holmium Laser Therapy of Scrotum Paget Disease.

Jianbo Wang, Dalian Medical University, China

6) Ureteral stent retrieval and ureteral stent exchange using crochet hook technique for female patients.

Takashi Kawahara, Yokohama City University, Japan

7) Endoscopic treatment for obstructive complications after urinary diversion.

Cao ming, Renji Hospital, Shanghai, China

8) A novel endourological strategy in complete staghorn calculus patient with comorbidity: 2-staged TUL -assisted PCNL (TAP).

Noritaka Ishito, Kurashiki Medical Center, Japan

9) Impact of Right-sided Nephrectomy on Long-term Outcomes in Retroperitoneoscopic Live Donor Nephrectomy: Based on 533 Consecutive Cases at Single Center.

Takafumi Yagisawa, Tokyo Women's Medical University, Japan

17:55 - 18:35 Session III (7 minutes presentation following 3minutes discussion)

Chairmen: Prof. Ichikawa T, Japan

Prof. Gang Zhu, China

10) Clinical practice for BPH medical treatment in China.

Xianghua Zhang, Peking University Wujieping Urology Center, China

11) IMPROVEMENT OF SEXUAL FUNCTIONS IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA TREATED BY HOLMIUM LASER ENUCLEATION OF

THE PROSTATE (HoLEP).

Kazuhiko Fukumoto, Kawasaki Medical School, Japan

12) Early outcomes and safety analysis of the Beijing LESS Laparoscopic Radical Prostatectomy Technique.

Gang Zhu, Beijing Hospital, China

13) Predictive factors for acute and late urinary toxicities after permanent prostate brachytherapy.

Ryuta Tanimoto, Okayama University, Japan

18:35- 18:40 Closing Address

Prof. Hiromi Kumon, President of CJUA (Japan)

[Abstracts]

Special lecture

From Chinese Urologist to a Doctor of Japan: A Journey through Education and Research.

Xiuxian Wu

(Department of Urology, Faculty of Medicine, Kagawa University ,Japan)

In this symposium, I will introduce my presentation as From Chinese Urologist to a Doctor of Japan: A Journey through Education and Research. Our department accepted one Chinese urologist, supported by the Japanese Urological Association International Foundation in 2009 and 2010, respectively. I will also introduce their current active progress in China.

Prior to visit to Japan, I had carried out clinical work such as kidney cancer, bladder cancer, and renal transplantation as an urologist for 12 years at the Qiqihar Medical University Hospital in China. I came to Japan in October 1996 and studied in the Department of Urology, Kyoto University for one year as a Sasakawa Medical Scholarship trainee. Afterwards, I re-visited Japan and enrolled in the graduate school of Kyoto University. At my graduate school, I was engaged with research projects such as exploring molecular markers of early diagnosis of bladder cancer and developing molecular targeted therapeutic agents using primary cultured cells isolated from renal cancer tissue obtained at the time of surgery.

For foreign doctors, in order to get Medical License, they have to pass a preliminary qualification test that consists of three components: basic medicine, clinical medicine, and a skill test. The preliminary qualification test is in essay format. Pass rate is about 3%, most foreign medical school graduates took the exam 3-5 times and did not pass it. Unfortunately, most of them give up at that step. Then, they should join a clinical training for one year after passing the preliminary qualification test. Finally, they will be qualified to take the Japanese national medical license board. As I graduated from Medical School in China 26 years ago, it was challenging to get a medical license in Japan. Fortunately, I passed the Japanese national medical license board in March 2011. I just now finished 8 months initiated clinical training which provided by the Ministry of Health, Labour and Welfare of Japan and the Clinical Training Center of Kagawa University, and started my career again as an urologist in

Japan. In the future, I will strive to develop new therapeutics for cancer and make contributions to local communities through medical care services. Furthermore, I want to contribute toward the medical and cultural exchange between China and Japan.

1 . Androgen Ablation Therapy Increases Prostate Cancer Stem Cells via Hedgehog Pathway

ZHANG Yu-xi, BI Jian-bin, KONG Chui-ze

(Department of Urology, The First Hospital, China Medical University, China)

Abstract

Objective Prostate cancer is the most commonly diagnosed malignancy in older men in the west world. At initial stages, prostate cancer cells depend on androgens for growth, and therefore androgen ablation therapy (ADT) is the standard therapy for the treatment of prostate cancers. However, androgen-independent disease will ultimately intervene in most patients. We investigate the mechanism of ADT affecting prostate cancer stem cells (PrCSCs) and the gene relative to stem cells.

Methods An androgen-independent subline (LNCaPAI) was established by continuously culturing the LNCaP cells in the medium without androgen. After the LNCaP cells were ablated of androgen, the proportion of PrCSC (CD44⁺/CD24⁻ subpopulation) was assessed by flow cytometry analysis and the expressions of *BMI-1*, *ABCG2*, *NANOG*, *Gli-1*, and *SMO* were assessed by western blot and real-time RT-PCR. After the prostate cancer cells were treated with 10 μM cyclopamine for one week, the proportion of CD44⁺/CD24⁻ in prostate cancer cells were assessed by flow cytometry analysis.

Results The LNCaPAI subline were established from androgen-dependent LNCaP cells. CCK-8 assay illustrated that LNCaP-AI cells showed stronger proliferative ability than LNCaP cells in androgen deprivation culture medium. PSA secretion was stimulated with increasing concentration of DHT in both LNCaP and LNCaP-AI cells, but the PSA secretion was much higher for LNCaP cells than for LNCaP-AI cells. In the LNCaP cell

line, the CD44⁺/CD24⁻ subpopulation (PrCSC) was rare (0.04%), whereas the LNCaPAI cell line had a more prevalent CD44⁺/CD24⁻ population (0.74%). After the LNCaP cells were cultured in an androgen deprivation condition, the CD44⁺/CD24⁻ subpopulation increased. The expressions of *BMI-1*, *ABCG2*, *NANOG*, *Gli-1*, and *SMO* increased after the LNCaP cells cultured in an androgen deprivation condition. The expressions of *BMI-1*, *ABCG-2*, *NANOG*, *GLI-1*, and *SMO* in LNCaP-AI were more than those in LNCaP cells. We further investigated the role of Hedgehog pathway in prostate cancer. After the LNCaP and LNCaP-AI cells have been treated with 10 μ M cyclopamine for one week, the CD44⁺/CD24⁻ subpopulation significantly decreased. Inhibition of Hedgehog pathway also prevents the increase of CD44⁺/CD24⁻ subpopulation induced by ADT.

Conclusion It was found for the first time in our study that the CD44⁺/CD24⁻ subpopulation increased in androgen-dependent prostate cancer after androgen deprivation. The expressions of *BMI-1*, *ABCG-2*, *NANOG*, *GLI-1*, and *SMO* increased after longer androgen deprivation *in vitro*. ADT increased the PrCSCs in androgen-dependent prostate cancer might via Hedgehog pathway.

2. Oncolytic herpes simplex virus type 1 (HSV-1) armed with IL-12 for treating bladder cancer.

Jiangang Hou¹, Hiroshi Fukuhara¹, Yuzuri Tsurumaki Sato¹, Yuta Takeshima¹, Yukio Homma¹, Yasushi Ino², Tomoki Todo²

¹Department of Urology, Graduate School of Medicine, The University of Tokyo,

²Division of Innovative Cancer Therapy, the Advanced Clinical Research Center, The Institute of Medical Science, The University of Tokyo, Japan)

Oncolytic herpes simplex viruses type 1 (HSV-1) that replicate selectively in cancer cells are promising therapeutic agents for cancer. G47 Δ is a third-generation oncolytic HSV-1 that has triple mutations in the *gamma34.5*, *alpha47* and *ICP6* genes, and the first recombinant oncolytic virus to be used in a clinical trial in Japan. Using the G47 Δ backbone, we constructed T-mFIL12, an HSV-1 armed with fusion-type murine interleukin 12 (IL-12). We have previously shown that, when inoculated intraneoplastically at 1 x 10⁶ pfu, T-mFIL12 was significantly better at inhibiting the growth of subcutaneous MB-49 tumors (murine bladder cancer) in syngeneic C57BL/6 mice compared with T-01, a control virus. From a clinical standpoint, we further

sought various applications of IL-12-expressing oncolytic HSV-1 for treating bladder cancer.

A lung metastases model was generated by injecting MB-49 cells intravenously in C57BL/6 mice, and viruses were repeatedly administered into the tail vein. Both T-01 and T-mfIL12 (5×10^6 pfu) significantly prolonged the survival compared with mock, with T-mfIL12 being more efficacious than T-01. In an orthotopic bladder cancer model, intravesical inoculations with T-mfIL12 (1×10^6 pfu) prolonged the survival of C57BL/6 mice with MB-49 bladder cancer compared with T-01. Further, using the orthotopic model, cancer-bearing mice were treated with intravesical administration of T-mfIL12 (1×10^6 pfu) or mock in combination with BCG (1.35mg) or PBS. The combination of T-mfIL12 and BCG prolonged the survival of the mice with MB-49 bladder cancer compared with T-mfIL12 alone or BCG alone. When athymic mice bearing subcutaneous human RT-4 bladder cancer were treated with intraneoplastic inoculation of G47 Δ (4×10^4 pfu) or mock in combination with intraperitoneal injection of Gefitinib, an epidermal growth factor receptor inhibitor, or PBS, the combination therapy was significantly more efficacious than G47 Δ alone or Gefitinib alone.

Results indicate that the G47 Δ -derived oncolytic HSV-1's are useful for treating bladder cancer in a variety of ways. The efficacy of G47 Δ may be greatly enhanced by arming the virus with IL-12.

3. The functional and transcriptional regulation mechanism of UCA1, a novel bladder-cancer specific long noncoding RNA.

Zhang Zheng

(Department of Urology, The First Affiliated Hospital of Peking University, China)

Bladder cancer is the most common urinary malignant tumor in China and the incidence is increasing in recent years. The prognosis of invasive bladder cancer is poor in spite of radical surgery and adjuvant therapy. To find a better biological target for diagnosis and treatment of bladder cancer, we screened and identified a novel gene by new bioinformatical methods developed ourselves and named the gene as UCA1(Urotheial Carcinoma Antigen 1).UCA1 has been proved a long non-coding RNA and to express in bladder cancer specifically. We have finished gene cloning,localizing and sequencing under the auspices of the National Natural Science Foundation.The correlation between UCA1 and tumor invasion was also observed. To detect the

functional region of UCA1 promoter and important transcription factor contributing to its overexpression in bladder cancer cell, A series of different length of UCA1 promoter was constructed into luciferase report gene vector. A functional region in the promoter was then identified by 5'deletion analysis. Silico analysis and site directed mutagenesis analysis were used to assess and locate important transcriptional factors. A region of 180bp was restricted to be highly related with over-expression of UCA1 and ModelInspector predicted thirteen potential binding sites for the loss or gain of activity from the deletion constructs. SDM of these TFBS led to a drop in activity in six transcriptional factor mutants. Finally, C/EBP β was proved to act as an important transcriptional regulator and up-regulate UCA1 expression in bladder cancer by ChIP and EMSA. The undergoing study on function suggested that UCA1 is combined with BRG1, which is a core subunit of the chromatin remodeling complex SWI/SNF. Since it has been proved that C/EBP β is inhibited by SWI/SNF, we hypothesize that UCA1 may affect the chromatin-remodeling function of SWI / SNF by binding BRG1, weakening inhibition of tumor by BRG1 in one hand, and inhibiting down-regulation of C/EBP β by SWI/SNF in the other hand. This mechanism is described as a UCA1-BGR1-C/EBP β -UCA1 positive feedback circle by our group. Through this circle, UCA1 may up-regulate itself and amplify its function in promoting bladder cancer. We will study further on this hypothesis.

4 . Association Analysis of 14 Single Nucleotide Polymorphisms with Prostate Cancer Risk in Chinese Subjects

Lei Wang^a, Haruki Kaku^b, Peng Huang^b, Ming Li^c, Liping Xie^d, Kenji Shimizu^e, Hiromi Kumon^b, and Yanqun Na^a

^aPeking University Wujieping Urology Center, China

^bDepartment of Urology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan

^cDepartment of Urology, Peking University School of Oncology, Beijing Cancer Hospital & Institute, China

^dDepartment of Urology, the First Affiliated Hospital, School of Medicine, Zhejiang University, China

^eDepartment of Molecular Genetics Okayama University Graduate Scholl of Medicine,

Dentistry and Pharmaceutical Sciences, Japan)

ABSTRACT

AIM Accumulating evidence supports an important role of genetics in prostate cancer etiology. Single nucleotide polymorphism reflects a crucial aspect of individual difference in genetic susceptibility. The present study aimed to investigate the association between 14 missense single nucleotide polymorphisms and prostate cancer risk in Chinese Han population and established a Risk Prediction Model.

PATIENTS AND METHODS One hundred and fifty prostate cancer patients and 114 cancer-free controls, which were recruited from five university hospitals in Beijing city and one university hospital in Hangzhou city between January 2009 and June 2010, were included in the cancer association study. The fourteen selected missense single nucleotide polymorphisms, which located in different tumor-related genes and had been verified to be associated with prostate cancer susceptibility in Japanese population, were genotyped using Snapshot assay.

RESULTS Four single nucleotide polymorphisms were found to be significantly associated with risk of prostate cancer in Chinese Population. Among them, 3 single nucleotide polymorphisms had high-risk associations (Odds Ratio range 1.72-4.78) and the other one had protective effect (Odds Ratio 0.26). The four related genes included two DNA-repair genes and one each of tumor suppressor gene and apoptosis regulator gene. Two other single nucleotide polymorphisms, each locate in chromosome-segregation gene and metabolic enzymes gene, had borderline significance. Cumulative effects were also revealed for these 4 single nucleotide polymorphisms by using a multiple odds ratio method. A risk predicting model was established in predicting prostate cancer risk among Chinese men. The life-time risk of prostate cancer occurrence for the highest-risk group we appointed was 20.2 times higher than that of the lowest-risk group (8.53% vs. 0.42%).

CONCLUSIONS According to the present case-control study, many missense genetic variants might contribute to the genetic predisposition to prostate cancer in Chinese Han population. These variants also manifested certain effects in predicting prostate cancer occurrence. Larger studies with sufficient power will be needed to confirm our findings.

5. Clinical Research of Holmium Laser Therapy of Scrotum Paget Disease

Jianbo Wang, Xishuang Song, Zhiwei Zhang, Deyong Yang

(Department of Urology, The First Affiliated Hospital of Dalian Medical University, China)

[ABSTRACT]

Objective: To investigate the holmium laser therapy of scrotum Paget disease.

Methods: 31 patients with scrotal skin lesions confirmed as scrotum Paget disease in stage A by biopsy were carried out the treatment of holmium laser on the basis of the anti-infection and the skin preparation. All patients were followed up. The relapsing patients were cured by holmium Laser.

Results: The mean operation time was 20~60 minutes. The surgery was totally undertaken but only 6 case was done a second time because of postoperative recurrence. The 25 patients were not recurred during 1 to 3 years while the 6 patients of second time were not recurred during 1 to 2 years.

Conclusions: The patients with scrotal skin lesions should be diagnosed by biopsy as early as possible and the holmium laser therapy might be the best means of curing the disease in stage A.

6 . Ureteral stent retrieval and ureteral stent exchange using crochet hook technique for female patients.

Takashi Kawahara^{1, 2}, Hiroki Ito^{1, 2}, Hideyuki Terao¹, Takehiko Ogawa², Hiroji Uemura², Yoshinobu Kubota², Junichi Matsuzaki¹

(¹ Department of urology, Ohguchi Higashi General Hospital, ² Department of urology, Yokohama City University Graduate School of Medicine , Japan)

ABSTRACT

Objectives: We previously reported the procedures of ureteral stent removal and ureteral stent exchange using crochet hook technique. We describe the detailed technique and outcome of these procedures.

Methods: A total of 40 female patients (56 stents) underwent the removal of ureteral stents using crochet hook technique with no cystoscopy and no fluoroscopy. All procedures were carried out with the patients either under anesthesia, conscious sedation, or analgesic suppositories as deemed appropriate for each procedure including Shock Wave Lithotripsy (SWL), Ureteroscopy (URS), Percutaneous Nephrolithotomy (PCNL), and ureteral stent removal. A total of 21 ureteral stents were exchanged using crochet hook technique for female patients without cystoscopy. All procedures were carried out with the patients under conscious sedation.

Results: A total of 47 of the 56 stents (83.9%) were successfully removed. In addition, 47 of 52 (90.4%) were successfully removed except for two migrated stents and two heavily encrusted stents which could not be removed using cystoscopy. Concerning pain, ureteral stent removal using the crochet hook technique showed a lower visual analogue pain scale (VAPS) score than for the standard technique using cystoscopy. And a total of 20 of the 21 stents (95.2%) were successfully exchanged and one stent was unsuccessful including migration to the ureter.

Conclusions: Ureteral stent removal and exchange using a crochet hook is easy, safe, and cost effective. This technique was also easy to learn.

7. Endoscopic treatment for obstructive complications after urinary diversion.

Cao ming, Xue Wei, Huang Yiran
(Renji Hospital, Shanghai, China)

Ureteric obstruction is a common complication after radical cystectomy and urinary diversion, which occurs in 4%-8% of all the patients. Urolithiasis and stricture formation at the anastomosis of the ureter and intestine are central to the etiology of this pathophysiologic change. Although not all patients with ureteroenteric stricture and hydronephrosis require intervention, there are quite a few people suffered with recurrence upper urinary infection, obstinate flank pain, or renal insufficiency

associated with anatomical obstruction were suggested to be performed with operative treatment. Traditionally this complication has been managed with open surgery, however, this procedure is a great challenge because of the lack of anatomic landmarks and frequent adhesions from previous surgery. Currently, minimally invasive endourological techniques were used more frequently for the treatment and may become an alternative to open surgery. We present our experience with patients who presented with ureteric obstruction after radical cystectomy and urinary diversion.

8. A novel endourological strategy in complete staghorn calculus patient with comorbidity: 2-staged TUL -assisted PCNL (TAP).

Noritaka ISHITO, Tomoko SAKO, Shinsuke GOHARA, Yoichi SHIOTSUKA, Yasuo YAMAMOTO, Hitoshi TAKAMOTO

(Department of Urology, Kurashiki Medical Center, Japan)

Introduction

Endourological options in complete staghorn calculus patient with comorbidity are still challenging and controversial regarding minimal invasiveness. We studied the usefulness and safety of a novel technique of 2-staged TUL-assisted PCNL (TAP) in a complete staghorn calculus patient with comorbidity.

Materials and Methods

The patient profile is as follows: Age 85y.o. Male physician, BMI: 24.2. He suffered from left complete staghorn calculus (82×53mm, CT value: 1550HU) without hydronephrosis. Comorbidity was pyelonephritis, renal insufficiency and requiring anti-coagulant. PCNL and flexible-TUL were simultaneously performed (TUL-assisted PCNL: TAP). Nephrostomy was formed in the modified Valdivia position during the 1st TAP without occlusion UPJ balloon catheter. Excavation was started with flexible-TUL from the UPJ side of the stone for the caliceal fornix. Caliceal needle puncture was made percutaneously with simultaneous ultrasound, fluoroscopy and endoscopy during excavation with flexible-TUL. This new technique was named by tripartite synchronous tangibility (TRISTAN). After a week, the 2nd TAP was performed in the flank position to remove residual stones through mono-tract nephrostomy and using a ureteral access sheath.

Results

Total operation time was 125min (PCNL: 32min., flexible-TUL: 114min.) in the 1st TAP and 215min (PCNL: 188min., flexible-TUL: 196min.) in the 2nd TAP. The estimated bleeding volume was 281ml in the 1st TAP and 97ml in the 2nd TAP. Staghorn calculus was completely removed after salvage PCNL (local anesthesia). The patient was afebrile after surgery. There was no aggravation of renal function perioperatively. Stone was composed mainly of struvite.

Conclusion

A novel technique of 2-staged TAP for complete staghorn calculus is feasible and effective in problematic cases with pyelonephritis, renal insufficiency, octogenarians, and requiring anti-coagulants.

9 . Impact of Right-sided Nephrectomy on Long-term Outcomes in Retroperitoneoscopic Live Donor Nephrectomy: Based on 533 Consecutive Cases at Single Center

Takafumi Yagisawa, Kazuya Omoto, Taiji Nozaki, Yugo Sawada, Tomokazu Shimizu, Hideki Ishida and Kazunari Tanabe

(Department of Urology, Tokyo Women's Medical University, Japan)

Abstract

BACKGROUND:Short right renal veins might complicate kidney transplantation, thus the left kidney is preferred for live donation. In order to assess the long-term graft survival of right-sided retroperitoneoscopic live donor nephrectomy (RPLDN), we reviewed and compared the outcomes of right- and left-sided RPLDN.

METHODS:Five hundred and thirty three patients underwent live donor renal transplantation with allografts procured by RPLDN from July 2001 to August 2010 at our institute. Of these, 24 (4.5%) cases were of right-sided RPLDN (R-RPLDN). Study variables included operating time, time to procurement of the kidney, blood loss, warm ischemic time (WIT), postoperative hospital stay, and graft and patient survival rates.

RESULTS:No significant differences were found between the right- and left-sided RPLDN (L-RPLDN) groups regarding operating time, time to procurement of the kidney, mean blood loss, and postoperative hospital stay. No significant differences were found in the recipients' postoperative graft function and frequency of slow recovery graft function. Despite statistically significant increased WIT (mean 5.9 vs. 4.7 min, $p<0.001$) in R-RPLDN compared to that in L-RPLDN, there was no significant difference between the two groups regarding long-term patient and graft survival rates. The complication rate in R-RPLDN was 17% vs. 6.5% in L-RPLDN ($p=0.132$). No renal vein thrombosis was experienced in either group.

CONCLUSIONS:Although our study was retrospective and there was only a small number of R-RPLDN patients, R-RPLDN could be an option for laparoscopic live donor nephrectomy because of its safety and excellent long-term graft outcomes.

10. Clinical practice for BPH medical treatment in China

Xianghua Zhang

(Peking University Wujieping Urology Center, China)

Male LUTS can be divided into Storage, voiding or post micturition symptoms, and about 2/3 of men with LUTS have symptoms from more than one symptom group, many reasons can affect treatment decisions in male LUTS.

Treatment of LUTS should according to patients' symptom profiles. For example, patients with voiding LUTS should be offered with α_1 -AR antagonist (e.g. Tamsulosin), it is the standard treatment for BPH patients with low risk of progression, can improve IPSS and QOL of moderate to severe LUTS patients, shows good tolerability and safety, and the efficacy can be sustained for at least many years (results of many long term studies include China study support it). However, α_1 -AR antagonist monotherapy is not sufficient in all men with LUTS. If storage symptoms persist after α_1 -AR antagonist monotherapy, combination treatment with α_1 -AR antagonist and antimuscarinic agent might be considered; if patients only with predominant storage symptoms, antimuscarinic agents monotherapy also can be considered. Because antimuscarinic agents are associated with small rise in PVR in men with LUTS and proven BOO, it will be prescribe cautiously in these patients.

In conclusion, symptoms decide the treatment of male LUTS. Patients with voiding

LUTS should be offered with α 1-AR antagonist; for patients with both Voiding and storage LUTS, combination treatment with α 1-AR antagonist and antimuscarinic agent might be considered; if patients only with predominant storage symptoms, antimuscarinic agents monotherapy also can be considered.

11. IMPROVEMENT OF SEXUAL FUNCTIONS IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA TREATED BY HOLMIUM LASER ENUCLEATION OF THE PROSTATE (HoLEP).

Kazuhiko Fukumoto, Teruhiko Yokoyama, Shin Ohira, Aya Obatake, Masaichiro Fujita, Tomohiro Fujii, Yoshimasa Jo, Yoshiyuki Miyaji, Atsushi Nagai
(Department of Urology, Kawasaki Medical School, Kurashiki, Japan)

Introduction and Objective

Holmium laser enucleation of the prostate (HoLEP) for patients with benign prostatic hyperplasia (BPH) is expected to improve lower urinary symptoms (LUTS). It has been reported that successful treatment of LUTS is associated with improvement of erectile dysfunction (ED). In this study, we investigated the effects of HoLEP to sexual functions in patients with BPH.

Methods

Seventy out of 210 patients treated with HoLEP between October 2007 and March 2011 were evaluated by International Prostate Symptom Score (IPSS), QOL index, International Index of Erectile Function 5 (IIEF-5), and sexual function and sexual bother questionnaire of UCLA Prostate Cancer Index (UCLA PCI) before the treatment and at 3, 6 and 12 months post treatment.

Results

The mean prostate specimen weight was 30.2gms. with a range of 3 gms. to 106 gms. The mean IPSS score improved from 20.6 to 7.57 at 3 months ($p < 0.001$), to 6.64 at 6 months ($p < 0.001$) and to 6.32 at 12 months ($p < 0.001$). The mean QOL index improved from 5.01 to 2.06 at 3 months ($p < 0.001$), to 2.01 at 6 months ($p < 0.001$) and to 1.90 at 12 months ($p < 0.001$). The mean IIEF-5 score significantly decreased from 7.88 to 6.07 at 12 months ($p = 0.003$). In regards to the sexual functions of UCLA PCI, overall sexual function and sexual bother did not change significantly after treatment. However, 3 out

of 7 items, frequency of erections, frequency of intercourse, and morning erections were significantly improved after treatment (Table 1). Interestingly, 21(38.9%) out of 54 patients without sexual intercourse (SI) before treatment regained SI after treatment. On the contrary, only one (6.3%) out of 16 patients with SI before treatment lost SI after treatment.

Conclusions

HoLEP for BPH patients is associated with significant improvement in some of the sexual functions as well as LUTS. Especially, morning erection can significantly improve during 3 to 12 months after HoLEP.

12. Early outcomes and safety analysis of the Beijing LESS Laparoscopic Radical Prostatectomy Technique

Gang Zhu¹, Yaqun Zhang¹, Philippe Grange², Kilian Walsh³, Bin Jin¹, Yaoguang Zhang¹, Gordon Muir², Ben Wan¹, Jianye Wang¹.

(1. Department of Urology, Beijing Hospital, China.

2. Department of Urology, Transplant and Abdomen Clinical Academic Group, Kings Health Partners, King's College Hospital, United Kingdom.

3. Department of Urology, University Hospital Galway, , Ireland)

Abstract

Purpose: The aim of this paper is to illustrate the safety, adoption and adaptation of our surgical technique of LESS radical prostatectomy (LESS-LRP) with conventional and routinely available instruments.

Materials and Methods: A prospective clinical database was established in September 2010 to assess the outcome following the introduction of a novel technique of LESS-LRP at our institution. By August 2011 six procedures had been performed. The mean patient age was 74.7 (74-76 yrs.). The mean BMI was 23.8 (19.5-32.2 kg/m²). The LESS-LRP was performed through an extra-peritoneal approach by using single port access with QudaPort, 0° lens 5mm flexible tip video-laparoscope and conventional, commercially available laparoscopic instruments. All procedures underwent LESS-LRP by one surgeon. Parameters assessed were operative time, estimated blood loss,

intraoperative complications, drainage time, post-operative pain score (VAPS, 0-10), pathological results and post-operative PSA levels.

Results: LESS-LRP was possible for all six cases without additional trocar placement or conversion to standard laparoscopic or open radical prostatectomy. The mean operative times were 252.5 (190-305 min), estimated blood loss was 300 (100-500 ml). There was no documentable intraoperative complication. The wound-drainage time was a mean 5.2 (2-7 d), and the first post-operative day VAPS was 0.83 (0-3). Final pathological staging was pT2aN0M0 in 4 cases and pT2cN0M0 in 2 cases. Surgical margins were negative for cancer. The one-month post-operative PSA was less than 0.02 ng/ml in each case. Two were continent without pad usage and 4/6 cases were utilising 1 pad/day.

Conclusions: Our technique LESS-LRP is feasible and early outcomes are acceptable. We plan to continue and welcome other institutions adopting this method.

13. Predictive factors for acute and late urinary toxicities after permanent prostate brachytherapy

Ryuta Tanimoto¹, Kensuke Bekku¹, Norihisa Katayama², Yasuyuki Kobayashi¹, Shin Ebara¹, Motoo Araki¹, Mitsuhiro Takemoto², Kotaro Yoshio², Hiroyuki Yanai³, Haruki Kaku¹, Yasutomo Nasu¹, Hiromi Kumon¹

(¹Department of Urology, ²Department of Radiology, and ³Department of Pathology, Okayama University, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan)

Abstract

PURPOSE: To describe the frequency of acute and late Radiation Therapy Oncology Group (RTOG) urinary toxicity and the predictive factors associated with urinary toxicity in consecutive prostate brachytherapy patients.

PATIENTS AND METHODS: From January 2004 to April 2011, 466 patients underwent permanent ¹²⁵I-seed brachytherapy (median follow-up, 48 months). The IPSS and RTOG toxicity data were prospectively collected. The prostate volume, IPSS before and after brachytherapy and post-implant analysis were examined for an

association with urinary toxicity which was defined as RTOG urinary toxicity 1 or more. Logistic regression analysis was used to examine the factors associated with urinary toxicity.

RESULTS: The rate of RTOG urinary toxicity Grade 1 or more at 1, 6, 12, 24, 36, 48 months was 67%, 40%, 21%, 31%, 27%, 28%, respectively. Grade 2 or more urinary toxicity was less than 1% at an each point. IPSS was highest at 3 months and returned to normal level at 12 months after brachytherapy. On univariate analysis, patients with larger prostate size, greater baseline IPSS, the higher prostate V100, higher prostate V150, higher prostate D90 and more number of seeds had more acute urinary toxicities 1 month as well as 12 months after brachytherapy. On multivariate analysis, the significant predictors for urinary toxicity were a greater baseline IPSS and prostate V100 one month as well as 12 months after brachytherapy.

CONCLUSION: Most urinary symptoms were tolerated and resolved within 12 months after prostate brachytherapy. Acute and late urinary toxicities after brachytherapy were strongly related with baseline IPSS and the prostate V100.