

The Fifth CJUA annual meeting

2011



China-Japan urological association

PROGRAM & ABSTRACTS

Date

Oct. 29, 2011

Venue

Nanjing international convention center

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



PROGRAM of the Fifth CJUA annual meeting

(2011.10.29 Nanjing China)

Meeting address: Room 208, Nanjing international convention center

8:30 - 8:40 Opening Address

Prof. Yanqun Na, President of CJUA (China)

8:40 - 9:50 Session I (7 minutes presentation following 3 minutes discussion)

Chairmen: Prof. Yukio Homma, Tokyo, Japan

Prof. Xianghua Zhang, Beijing, China

1. Early experience of botulinum toxin type A injection in patients with interstitial cystitis/ hypersensitive bladder syndrome.

Akira Nomia, et al. Tokyo University, Japan.

2. Urine alkalization by Citrates improves pain and other symptoms in patients with interstitial cystitis/bladder pain syndrome (IC/BPS).

Masaaki Ito, et al. Kyoto City Hospital, Japan

3. Synergistic anti-tumor effect of combined knockdown of the IAP genes on human bladder cancer T24 cells.

Yang D, et al. First Affiliated Hospital of Dalian Medical University, China

4. Over-expression of G-protein-coupled receptor 87 (GPR87) closely correlated with tumor proliferation in urothelial carcinomas of the bladder.

Xia Zhang, et al. Kagawa University, Japan

5. ncRAN, a Newly Identified Long Non-coding RNA, Enhances Human Bladder Tumor Growth, Invasion and Survival.

Yuyan Zhu, et al. No.1 Hospital of China Medical University, China

6. A Correlational Study between Expression of NGF and Diabetic Cystopathy in Diabetic Rats.

Xiaoqiang Liu, et al. 2nd hospital of Tianjin Medical University, China

7. Cooperative Research on Genetic Predisposition for Prostate Cancer in Asia by Analyzing Cumulative Association of SNPs -The Final Data.

Haruki Kaku, et al. Okayama University, Japan

9:50 - 10:10 Coffee Break

10:10 - 11:20 Session II (7 minutes presentation following 3 minutes discussion)

Chairmen: Prof. Atsushi Nagai, Kawasaki, Japan

Prof. Jianbin Bi, Shenyang, China

1. Initial results of Robot-assisted laparoscopic radical prostatectomy at Okayama University.

Shinya Uehara, et al. Okayama University Graduate School of Medicine, Japan

2. Benign lesions in surgically removed renal masses preoperatively suspected as renal cell carcinoma: the clinical and CT imaging features.

Wen Kong, et al. Renji Hospital, Shanghai Jiao Tong University School of Medicine, China

3. Health-Related Quality of Life in Patients with Localized Prostate Cancer Received High-Dose-Rate Brachytherapy: A Time-Course Analysis.

Atsushi Nagai, et al. Kawasaki Medical School, Japan

4. Salvage high-dose-rate brachytherapy for local prostate cancer recurrence after initial treatment.

Yoshimasa Jo, et al. Kawasaki Medical School, Japan

5. Clinical Study of Individual Therapy of Benign Prostate Hyperplasia with Different Dose Terazosin.

Jianliang Cai, et al. Peking University Wujieping Urology Center, China

6. Forty percent of patients with ureteral stones who visit the emergency room first are not followed by urologists.

Masaichiro Fujita, et al. Kawasaki Medical School, Japan

7. Development and application of a porcine heart tissue model for 2 micron continuous wave laser endoscopic technique training.

Kai Zhang, et al. Peking University Wujieping Urology Center, China

11:20 - 11:30 Closing Address

Prof. Hiromi Kumon, President of CJUA (Japan)

11:30 - 12:30 CJUA Leadership Meeting

[Abstracts]

Session I

1. Early experience of botulinum toxin type A injection in patients with interstitial cystitis/ hypersensitive bladder syndrome.

Akira Nomia¹, Tetsuya Fujimura¹, Takashi Naruse³, Motofumi Suzuki¹, Hiroshi Fukuhara¹, Yutaka Enomoto¹, Hiroaki Nishimatsu¹, Akira Ishikawa¹, Haruki Kume¹, Yasuhiko Igawa², Yukio Homma¹

(1.Department of Urology, University of Tokyo

2.Department of Continence Medicine, University of Tokyo

3.Department of Community Health Nursing, University of Tokyo, Japan)

The aim of the study

Interstitial cystitis/ hypersensitive bladder syndrome (IC/ HBS) is a chronic inflammatory disease of urothelium with unknown reason, with few effective therapeutic modalities. Recently, effectiveness and safety of botulinum toxin A (BTX-A) injection in patients with IC/ HBS has been reported. In this study, we examined effectiveness and safety of BTX-A injection therapy in Japanese IC/ HBS patients.

Materials and Methods

Patients with poor control of IC/ HBS symptoms (O'Leary and Sant's Interstitial Cystitis symptom index / problem index (OSSI/OSPI) both scored more than 6 points and visual analogue scale for pain more than 3 points) despite of various therapies (ex. hydrodistention, medical treatment, etc.) were enrolled in the study. All the patients had been diagnosed as IC/ HBS with hydrodistention at our institution. All the patients were injected into submucosal layer of the bladder trigone with 100 units of BTX-A under spinal or general anesthesia.

For symptom evaluation, OSSI/OSPI, VAS, overactive bladder symptom score (OABSS), International Prostate Symptom Score (IPSS), Core Lower urinary tract Symptom Score (CLSS), frequency volume chart (FVC), uroflowmetry were used before the therapy as the baseline and a month after the therapy. The protocol of the study was approved by our Institutional Review Board and was fully explained to the patients before informed consent was obtained.

Results

From October 2010 to March 2011, 18 patients (13 women and 5 men) with the average age of 64.4 years (range 35 to 79) were treated with BTX-A injection therapy. Before the therapy, OSSI/ OSPI scored 12.5 and 11.4 points, VAS was 6.5 points, OABSS was 8.1 points, and IPSS was 23.8 points in average. According to FVC, they voided 21.6 times during daytime and 4.0 times during night, and average voided volume was 95.0ml.

A month after the BTX-A injection, OSSI/ OSPI scored 10.9 and 8.6 points, VAS was 4.4 points, OABSS was 6.2 points, and IPSS was 17.3 points in average which changes were significant ($p<0.05$) except for OSSI. As for voiding, they voided 17.6 times during daytime and 3.3 times during night with average voided volume 130.0ml which changes were also significant ($p<0.05$).

No significant change in uroflowmetry was observed and no side effects which required additional therapy occurred

Conclusions

Trigonal injection therapy with 100 units of BTX-A can be one of effective and safe therapeutic modality for refractory IC/ HBS.

2. Urine alkalization by Citrates improves pain and other symptoms in patients with interstitial cystitis/bladder pain syndrome (IC/BPS).

Masaaki Ito, Hideki Tanoue, Toru Yoshida and Tomohiro Ueda
(Kyoto City Hospital, Japan)

Aims of study

Acidic urine may play a role in the development of symptoms in patients with interstitial cystitis/bladder pain syndrome (IC/BPS) because activation of afferent C-fibers can be triggered by excessive H⁺ ions. Here, we report the result of the study that was designed to evaluate the data of urine pH value and pain intensity. We also investigated sleep disturbance in this study.

Materials and methods

Thirty-four participants who provided written consent were enrolled in this study, and thirty were selected based on symptoms recorded in 2-day voiding diaries and urine pH of each voiding during the screening period. Kings health questionnaire (KHQ), OLeary & Sant IC symptom and problem indices (ICSI and ICPI) were also used to evaluate the symptoms. Sleep disturbance was investigated using Pittsburg sleep quality index questionnaire (PSQI). The intensities of pain and of discomfort were recorded by patients at each voiding using a 4-point scale (0 – 3). Following the screening period, the participants were administered citrates (a mixture of potassium citrate and sodium citrate) for four weeks. A compact pH meter was used to measure the pH. Patients with insufficient alkalization of urine were administered higher dose of the citrates for four more weeks, and then changes in symptoms were evaluated.

Results

Spot urine tests using the pH meter before treatment revealed that many patients had urine pH lower than 5.2, which is lower limit of the urine pH test paper. After the treatment, the urine pH at each voiding was increased, and the number of patients with low urine pH was also decreased. The average volume per voiding and the maximum voided volume were increased significantly ($P=0.001$ and <0.001 , respectively). The mean intensities of pain and discomfort at voiding were decreased significantly ($P=0.001$ and 0.013 , respectively). For the KHQ, general health perception, incontinence impact, and physical limitations improved significantly ($P=0.043$, 0.026 , and 0.015 , respectively). The ICSI and ICPI were also decreased significantly ($P=0.01$).

With respect to sleep disturbances, a small improvement was observed in the PSQI, but the improvement was not significant.

Conclusion

In this study, we could evaluate precisely the elevation of urine pH after the administration of citrates throughout the day. The results of this study suggest that urine alkalization could be effective to reduce the symptoms of patients with IC/BPS.

3 . Synergistic anti-tumor effect of combined knockdown of the IAP genes on human bladder cancer T24 cells.

Yang D¹, Song X¹, Zhang J², Ye L¹, Wang S², Che X¹, Wang J¹, Zhang Z¹, Wang L¹, Shi W².

(1.Department of Urology, First Affiliated Hospital of Dalian Medical University,
2.Department of Biochemistry, Dalian Medical University, China)

Abstract

Livin, X-linked inhibitor of apoptosis (XIAP), and Survivin are three well-known inhibitors of apoptosis almost exclusively over-expressed in cancer cells and are considered potent targets for cancer treatment. In the present study, we found that Livin, XIAP, and Survivin were simultaneously expressed in bladder cancer cells. We speculated that Livin, XIAP, and Survivin might have synergistic effects on cell growth and apoptosis. Our results confirmed that combined knockdown of all these three genes can synergistically inhibit the proliferation and transformation ability of high-grade bladder cancer T24 cells and promote the cell apoptotic sensitivity to chemotherapy. Furthermore, combined knockdown of Livin, XIAP, and Survivin can markedly increase the abundance of active caspase-3, active caspase-7, active caspase-9, and cytosolic Smac. Our findings imply that combined silencing of Livin, XIAP, and Survivin may be a potent multitargeted gene therapy for bladder cancer.

4. Over-expression of G-protein-coupled receptor 87 (GPR87) closely correlated with tumor proliferation in urothelial carcinomas of the bladder.

Xia Zhang, Homare Okazoe, Dage liu, Xiuxian Wu, Shinsuke Shibuya, Mikio Sugimoto, Yoshiyuki Kakehi
(Department of Urology, 2nd Department of Surgery, Faculty of Med, Kagawa Univ, Japan)

Introduction and Objective

The orphan G-protein-coupled receptor 87 (GPR87) has recently been deorphanized and shown to be a receptor of lysophosphatidic acid (LPA). A comprehensive analysis using gene chip technology demonstrated that GPR87 mRNA was preferentially over-expressed in squamous cell carcinoma of different location. It

was over-expressed in some bladder cancer tissues and adenocarcinoma of the lung. In this study, expression levels of GPR87 mRNA were analyzed in bladder cell lines and influence of silencing GPR87 mRNA on cell proliferation was investigated. Protein expression of GPR87 in bladder cancer was also analyzed with special relevance to cell proliferation including tumor grade and Ki-67 index.

Methods

GPR87 mRNA levels were measured by real-time RT-PCR in 7 human bladder cancer cell lines, HT1197, J253, J28, RT112, RT4, T24 and TCSSP. Small interfering RNA (siRNA) knockdown of GPR87 also performed using a SMART pool-plus set of 4 individual siRNAs. The cell viability was established using the MTT assay. Bladder urothelial carcinomas (UCs) were obtained from 103 patients (3 Tis, 68 Ta, 21 T1, 11 T2<) by transurethral resection during the period between 2006 and 2009. Median age of these patients was 71 years ranging 43 to 95. Formalin-fixed and paraffin-embedded tumor specimens were subjected to immunohistochemical analysis.

Results

Relative expression of GPR87 to GAPDH was highest in HT1197 and lowest in T24 cells. Silencing of GPR87 mRNA resulted in 59% reduction of cell viability in HT1197 cells. GPR87 expression of bladder tumors was immunohistochemically positive in 61 (59%) of 103 patients. Positive rate of GPR87 immuno-staining high grade (n=44) and low grade (n=59) tumors (WHO/ISUP 2004) were 75% and 48%, respectively (p=0.008). Ki-67 proliferation index in GPR87 negative tumors was $4.4\pm 5.8\%$ whereas that in GPR87 positive tumors was $22.1\pm 17.8\%$ (p<0.0001). The positive rate of GPR87 in Ki-67 positive (n=36) and negative (n=67) tumors were 94% and 40%, respectively (p<0.0001).

Conclusions

These data strongly suggest that GPR87 expression is associated with tumor proliferation of bladder UC. It is imperative to be elucidated whether GPR87 expression in bladder UCs is associated with recurrence and malignant progression in bladder UCs.

5. *ncRAN*, a Newly Identified Long Non-coding RNA, Enhances Human Bladder

Tumor Growth, Invasion and Survival.

Yuyan Zhu¹, Meng Yu², Zhenhua Li¹, Chuize Kong¹, Jianbin Bi¹, Jun Li¹, Zeliang Li¹

(1.Department of Urology, No.1 Hospital of China Medical University

2.Department of Reproductive Biology and Transgenic Animals, China Medical University, China.)

Objectives

To study the functional significance of ncRAN, a newly identified long non-coding RNA, expression in bladder cancer growth, invasion and survival.

Methods

Expression of ncRAN isoforms was analyzed by RT-PCR in 40 clinical specimens and 4 bladder cancer cell lines, respectively. The expression of ncRAN in the clinical specimens was correlated to clinical stage or grade to assess for potential relationship. ncRAN-long form or ncRAN-short form was stably overexpressed in human bladder cancer cell line, RT-4(superficial) exhibiting low endogenous expression of ncRAN, respectively. The influence of ncRAN on cancer cell survival was evaluated by silencing with short hairpin RNA in 5637 cells(invasive). Functional assays were performed to study the resulting changes in cell proliferation, motility, invasion and survival.

Results

Expression of ncRAN was significantly higher in bladder cancers compared with normal tissues ($P < 0.01$) and in invasive tumor compared with superficial ones($P < 0.01$). Consistently, ncRAN expressed significantly higher in invasive bladder tumor cell lines (5637, T24, EJ)than that in superficial tumor cell lines (RT-4). Overexpression of ncRAN in RT-4 cells significantly enhanced cell proliferation, migration and invasion. Silencing of ncRAN improved chemotherapy sensitivity in 5637 cells.

Conclusions

These observations suggest that ncRAN may play an important role in cancer cell growth, invasion and survival as a potential target for bladder cancer therapy.

6. A Correlational Study between Expression of NGF and Diabetic Cystopathy in Diabetic Rats.

Xiaoqiang Liu, Weifan Jiang, Gaofeng Zhang, Guang Sun

(Urology Dep. 2nd hospital of Tianjin Medical University, Tianjin Institute of Urology, China.)

Abstract

Objective To provide experimental basis for further study of the urodynamics of urinary storage dysfunction of diabetic cystopathy (DCP), and find out the relationship between NGF (nerve growth factor) in bladder and DCP in its occurrence and development as well as their effects.

Methods

Streptozotocin (STZ)-induced diabetic rats were employed as DCP models. Normal rats served as controls. 6, 9, 12 weeks after the induction of DM, the residual urine volume was measured and compliance of the bladder was evaluated by cystometry. The histopathologic appearance was observed under light and electric microscopes.

Results

(1) DCP models : 6 weeks after the STZ administration, the diabetic rats showed weight loss from their initial body weight (248.05 ± 15.517 vs. 322.80 ± 15.920) and a significant increase in the blood glucose level compared with the controls (30.900 ± 3.2942 vs. 4.787 ± 0.2973). They also displayed remarkably greater bladder weight than the controls (171.15 ± 6.081 vs. 135.53 ± 5.330) (mg). (2) Cystometry findings : Cystometry showed significant increase of bladder capacity, single voided volume, and post-void residual volume in the diabetic rats compared with the controls. In addition, the diabetic rats showed frequent unstable spontaneous contraction in the filling phase, which did not occur in the control rats. (3) Performance under the microscope : Microscopically, the muscle bundle arranged haphazardly and loosely in the observation group, collagen fibers in the muscle bundles reduced compared to control group. Ultrastructurally, the quantity of collagen fibers and intermediate junction among detrusor muscle cells decreased. (4) NGF : The expression of mean NGF protein level in the bladder at the 6th, 9th, 12th weeks was significantly reduced compared with that in the normal rats, and showed a decreasing trend over time.

Conclusions

Reduced expression of NGF and the progression of DCP are correlated.

7. Cooperative Research on Genetic Predisposition for Prostate Cancer in Asia by Analyzing Cumulative Association of SNPs -The Final Data.

Haruki Kaku^{1,2}, Masami Watanabe², Peng Huang¹, Akiko Sakai³, Yasutomo Nasu¹, Kenji Shimizu³, Lei Wang⁴, Kexin Xu⁴, Kai Yang⁵, Jiheng Zhang⁶, Ming Li⁶, Liping Xie⁵, Xiaofeng Wang⁴, Yanqun Na⁷ and Hiromi Kumon^{1,2}

(1.Department of Urology, Okayama University

2.Center of Gene and Cell Therapy, Okayama University

3.Department of Molecular Genetics, Okayama University

4.Department of Urology, Peking University People's Hospital

5.Department of Urology, the First Affiliated Hospital, School of Medicine, Zhejiang University;

6.Department of Urology, Peking University School of Oncology, Beijing Cancer Hospital

7.Department of Urology, Peking University Shougang Hospital, Japan)

Introduction and Objective

A cooperative research on genetic predisposition for prostate cancer in Japan, Korea, China and Singapore by analyzing cumulative association of SNPs was completed on March 2011. We herein report the final comprehensive results of genetic predisposition for prostate cancer in these countries.

Materials and Methods

We have genotyped more than 50 non-synonymous missense-SNPs of cancer-related genes in 619 prostate cancer patients and 1565 matched healthy male volunteers in Japan. We have also genotyped 150 prostate cancer patients (at Beijing and Hangzhou) and 114 healthy males in China, 143 prostate cancer patients and 150 healthy males (including 50 Chinese, 50 Indian and 50 Malayan people) in Singapore, and 100 prostate cancer patients and 100 volunteers with benign prostate hyperplasia in Korea.

Results

Genetic background and Risk-SNPs comparison were analyzed in the people of these countries. As a result, genetic background was similar : [the Japanese vs. Chinese 93%, Korean 92%, Chinese-Singaporean 91%, Malayan-Singaporean 87% and Indian-Singaporean 73%]. As for the Risk-SNPs comparison between the Japanese and Chinese, 4 were identical, 4 were similar and 3 were Chinese specific. Furthermore, we disclosed that at least 3 to 4 Risk-SNPs which were useful in the Japanese might be also available in Chinese and Korean people.

Conclusions

Our novel way of combining the risk factors and the specific SNPs analyses would be useful for predicting prostate cancer predisposition in the Asian people. We believe that the strategy can be also applied for the other malignancies and for the other ethnic populations by selecting proper SNPs combinations.

Session II

1 . Initial results of Robot-assisted laparoscopic radical prostatectomy at Okayama University.

Shinya Uehara, Takashi Saika, Yasuyuki Kobayashi, Shin Ebara, Motoo Araki, Katsumi Sasaki, Katsushi Ishii, Masami Watanabe, Toyohiko Watanabe, Haruki Kaku, Yasutomo Nasu, Hiromi Kumon

(Department of Urology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan)

Objectives

Initial results of Robot Assisted Laparoscopic Radical Prostatectomy (RALP) using the daVinci Surgical System at Okayama University were evaluated.

Patients/Method

A total of 12 patients of median age 68 years (range: 55-75), baseline BMI 24% (range: 20-27) and pre-operative serum PSA level 7.7 ng/ml (range: 4.0-10.3), underwent RALP at Okayama University between October 2010 and May 2011.

Result

The mean operative time was 341 minutes (range: 256-481), of which the mean operative time using the daVinci Surgical System was 266 minutes (range: 200-388). The mean estimated blood loss was 100 ml (range: 50-250). Histopathology showed pT stages, pT2 in (n=2); pT2b in (n=3) and pT2c in (n=7) patients, respectively. All specimens had a negative surgical margin. Catheterization was discontinued 6 days post operatively. Following catheter removal, 0-1 urinary pads were used in 58% patients soon after; in 83% patients at 1 month and in 91% patients, at 3 months. The median serum PSA level was found to be 0.003ng/ml (range: 0.003-0.092), at 3 months post operatively. One patient developed pulmonary infarction, one day after operation, but improved following conservative treatment.

Conclusion

The present results indicate that RALP is useful in assisting tumor removal and improving postoperative continence. Further study is required to establish the usefulness of RALP in lessening operative time and preserving sexual function.

2. Benign lesions in surgically removed renal masses preoperatively suspected as renal cell carcinoma: the clinical and CT imaging features.

Wen Kong, Ji-wei Huang, Jin Zhang, Bai-jun Dong, Chen Yong-hui, Wei Xue, Zhou Li-xin, Dong-ming Liu, Yi-ran Huang
(Department of Urology, Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China)

Objective

To analyze the clinical and CT imaging features of benign kidney lesions presumed to be renal cell carcinoma (RCC) before surgery in order to improve the diagnostic accuracy for renal masses.

Methods

From January 2003 to September 2010, 1531 patients underwent radical or partial nephrectomy for solitary renal cortical neoplasms presumed to be RCCs in preoperative imaging. Preoperative CT images, clinical records and pathological findings were retrospectively reviewed. Logistic regression was used to identify the

clinical predictors for benign lesions. For small renal masses (≤ 4 cm), CT imaging features, including plain phase attenuation, enhancement degree and enhancement patterns were compared between benign tumors (mainly angiomyolipoma and oncocytoma) and pathologically confirmed RCCs (mainly clear cell carcinoma, papillary carcinoma and chromophobe carcinoma).

Results

Pathological examinations revealed 81 (5.3%) benign lesions among 1531 patients. The incidence of benign lesions was 7.8% in small renal masses (≤ 4 cm), 3.8% in masses between 4cm and 7cm, and 1.1% in masses larger than 7cm ($P < 0.01$). Angiomyolipoma was the most predominant histologic subtype in benign renal lesions. Female gender (OR : 3.13, $P < 0.01$), younger age (OR : 0.94, $P < 0.01$) and smaller tumor size (OR : 0.75, $P < 0.01$) were independent predictors for benign kidney lesions. Thirty-nine cases of benign tumors (32 angiomyolipomas and 7 oncocytomas) and 60 cases of contemporary pathologically confirmed RCCs (42 clear cell carcinomas, 7 papillary carcinomas and 11 chromophobe carcinomas) were included for image analysis. None of 32 angiomyolipomas showed negative attenuation in unenhanced CT scans. High tumor attenuation in the plain phase was more common in cases of benign tumors ($P < 0.01$). In the arterial phase, the mean amount of enhancement for clear cell carcinomas was 87.18 ± 44.36 HU, which was greater than other pathologic types ($P < 0.05$); While oncocytomas exhibited the greatest enhancement degree in the venous phase with the mean enhancement attenuation 165.27 ± 29.32 HU ($P < 0.01$). The enhancement pattern over time was different among variant pathologic types. An early washout pattern was observed in most cases of clear cell carcinomas ($n=35$, 83.3%) and part of cases with chromophobe carcinomas ($n=7$, 63.6%); a gradual enhancement pattern was the most significant feature for oncocytomas ($n=7$, 100%); all the papillary carcinomas ($n=7$, 100%) and more than half of angiomyolipomas ($n=20$, 62.5%) exhibited prolonged enhancement characteristic ($P < 0.05$). Considering the homogeneity of tumor enhancement, clear cell carcinomas ($n=39$, 92.9%) and oncocytomas ($n=4$, 57.1%) usually showed heterogeneous enhancement, while all papillary carcinomas ($n=7$, 100%), most angiomyolipomas ($n=26$, 81.3%) and chromophobe carcinomas ($n=10$, 90.9%) showed homogeneous enhancement ($P < 0.01$).

Conclusions

Despite a low frequency, 5.3% of patients underwent surgery for benign kidney

lesions, mainly including angiomyolipoma and oncocytoma. Female gender, younger age and smaller tumor size are clinical predictors for benign lesions. Homogeneous enhancement and prolonged enhancement are valuable CT features for angiomyolipomas. Oncocytomas tend to be hypervascular and have a gradual enhancement pattern. The high-degree and heterogeneous enhancement, as well as the early washout pattern are useful parameters to identify clear cell carcinoma. Papillary carcinomas may manifest low-degree enhancement, prolonged and homogenous enhancement pattern; while chromophobe carcinomas usually show homogenous and moderate enhancement. All the above CT imaging features may be helpful to differentiate renal malignancy and benign lesions, as well as different histologic subtypes.

3. Health-Related Quality of Life in Patients with Localized Prostate Cancer Received High-Dose-Rate Brachytherapy: A Time-Course Analysis.

Atsushi Nagai, Masaichiro Fujita, Aya Obatake, Shin Ohira, Shohei Tsukimori, Kazuhiko Fukumoto, Tomohiro Fujii, Yoshimasa Jo, Teruhiko Yokoyama and Yoshiyuki Miyaji

(Department of Urology, Kawasaki Medical School, Kurashiki, Okayama, Japan)

Objectives

The purpose of this study was to make a time-course analysis of HRQoL in patients with localized prostate cancer receiving High-dose-rate brachytherapy (HDR-BT) employing general and disease-specific measures.

Methods

The examination of HRQoL has been performed since May 1, 2004. The 36-item Short-Form Health Survey version 2.0 (SF-36v2) and the University of California, Los Angeles Prostate Cancer Index (UCLA-PCI) were adopted. Patients were required to complete these two questionnaires before treatment (baseline), and again at 1, 6, 12 and 24 months after treatment. Only patients who completed all the questionnaires throughout the time period were eligible for this study. The average scores of both the SF-36 and the UCLA-PCI were calculated at each point to show a clear time-course change.

Results

The total number of patients was 229. The average scores in all aspects of the SF-36 at 24 months were better than those at the baseline. For the UCLA-PCI, the average scores for urination (UF and UB) and bowel movement (BF and BB) showed a similar transition to these of the SF-36, but those for sexuality (SF and SB) showed a significant declination.

Conclusions

HRQoL associated with HDR-BT seemed to be favorable, but the effects on sexual function and sexual bother were not so favorable. Therefore, more attention should be paid to sexuality to achieve a better patient HRQoL.

4. Salvage high-dose-rate brachytherapy for local prostate cancer recurrence after initial treatment.

Yoshimasa Jo, Masaichiro Fujita, Aya Obatake, Shin Ohira, Shohei Tsukimori, Kazuhiko Fukumoto, Tomohiro Fujii, Teruhiko Yokoyama, Yoshiyuki Miyaji and Atsushi Nagai

(Department of Urology, Kawasaki Medical School, Kurashiki, Okayama, Japan)

Objectives

We assessed the preliminary clinical results of salvage high-dose-rate brachytherapy (HDR-BT) applied in cases of suspected local recurrence or of residual tumor after initial treatment.

Patients and methods

The subjects were 20 patients who met the above conditions and underwent salvage HDR-BT between December 2006 and July 2010. The T stage at the initial treatment was T1c in 3 patients, T2 in 13 patients, and T3 in 4 patients. Seventeen patients received HDR-BT±external beam radiation therapy (EBRT), two patient received proton-beam irradiation and one patient received HIFU. Follow-up after the completion of salvage HDR-BT lasted 12-51 months (median: 24 months). A dose of 11.0 Gy radiation was delivered twice (22.0 Gy in total), separated by a 6-hour interval, on the day the applicators were inserted.

Results

Fourteen of the 20 cases (70%) remained in a biochemical non-evidence of disease (bNED) state. Three year PSA failure free survival rate was 52.6%. Hormone administration was initiated in the six cases of recurrence. No G3 or more severe events occurred, and the incidence of G2 was low during this study period.

Conclusion

Twenty cases treated with salvage HDR-BT, PSA levels remained low in fourteen cases, and the incidence of complications was also low. This suggests that salvage HDR-BT is effective as an option for treatment of local prostate cancer recurrence after initial treatment.

5. Clinical Study of Individual Therapy of Benign Prostate Hyperplasia with Different Dose Terazosin.

Jianliang Cai, Hongfeng Guo, Ningchen Li, Xianghua Zhang, Yanqun Na
(Peking University Wujieping Urology Center, China)

Objective

To investigate the therapeutic effect and safety of increasing Terazosin dose for benign prostate hyperplasia(BPH) treatment after the failure of common dose.

Methods

Twenty three BPH patients who had negative response with common dose Terazosin(2mg Qn) were investigate, 3mg Terazosin were taken orally every night, and the dose increased to 4mg when the therapeutic effects were not good after 2 weeks follow-up. IPSS value, QOL score, Qmax, adverse effects and blood pressure changes were evaluated in 4, 12 and 24 weeks.

Results

All 23 patients were finished clinical study, 11 patients took 3mg Terazosin Qn and 12 cases took 4mg Qn in the whole observation period. The base line(0 week) IPSS value were 22.78 ± 5.83 , QOL score were 3.95 ± 0.42 and Qmax were 8.36 ± 3.78 ; in 4 weeks, were IPSS value were 15.92 ± 4.37 , QOL score were 3.23 ± 0.54 , Qmax were 12.85 ± 3.27 ; in 12 weeks IPSS were 11.16 ± 4.93 , QOL were 3.06 ± 0.65 , Qmax were

14.49±4.50 ; in 24 weeks IPSS were 10.16±4.07, QOL were 3.01±0.45, Qmax were 14.70±5.36. Statistical analysis indicated that: IPSS value, the difference between 0/4 week, 0/12 week, 0/24 week, 4/12 week, 4/24 week had statistical significance($P<0.05$), while between 12/24 week, had no significance($P>0.05$); QOL score, the difference between 0/4 week, 0/12 week, 0/24 week had statistically significant difference($P<0.05$), 4/12 week, 4/24 week and 12/24 week had no significance($P>0.05$); Qmax, the differences between 0/4 week, 0/12 week, 0/24 week, 4/12 week and 4/24 week were statistically significant($P<0.05$), 12/24 week was not($P>0.05$). 2 cases who took 4mg Terazosin had dizziness complaint in the early stage, the symptom relieved after adjustment of hypertension treatment plan; no postural hypotension were found. The systolic blood pressure(SBP) of cases were: 141±15.6mmHg(0 week), 138±13.4mmHg(4 week), 135±16.2mmHg(12 week), 138±17.3mmHg(24 week), the difference among them had no statistical significance($P>0.05$), diastolic blood pressure(DBP) were: 85±7.4mmHg, 82±5.4mmHg, 80±7.7mmHg, 83±9.1mmHg in 0 week, 4 week, 12 week and 24 week, respectively, their difference were also not statistically significant($P>0.05$).

Conclusion

For benign prostate hyperplasia patients, when common dose terazosin(2mg Qn) treatment fail, increase the drug dose to 3-4mg Qn, their therapeutic effect can restore, and the side effect do not increase.

6 . Forty percent of patients with ureteral stones who visit the emergency room first are not followed by urologists.

Fujita M, Tsukimori S, Yokoyama T, Obatake A, Ohira S, Fukumoto K, Fujii T, Jo Y, Miyaji Y, Nagai A

(Department of Urology, Kawasaki Medical School, Kurashiki, Japan)

Introduction and Objective

Renal colic due to ureteral stone is one of the most common urological diseases and many patients visit the emergency room first. We investigated the backgrounds and patterns of follow-up of patients diagnosed as having ureteral stones in a single emergency department over the past 2 years.

Materials and Methods

After approval of the ethics committee of Kawasaki Medical School (KMS), we performed a retrospective study of 197 patients who were diagnosed as having ureteral stones in the emergency department at KMS Hospital between September 2008 and September 2010.

Results

The mean age of these patients was 49 years (range, 15-91 years), and the male to female ratio was 142:55. One hundred and thirty six patients had no previous history of urolithiasis. Ureteral stones were identified at the right ureter in 71 cases and at the left ureter in 94 cases. The ureteral stones were located at the proximal ureter in 21 patients, at the middle ureter in 14 patients, at the distal ureter in 72 patients, and the remaining 86 were not identified. The mean stone size was 3.0 mm (range, 1 -20 mm). One hundred and eighteen patients (59.9%) were followed up in our urological department. Spontaneous discharge of the stones was confirmed in 77 patients. Ultimately, 8, 7, and 1 patient underwent transurethral lithotripsy (TUL), extracorporeal shock wave lithotripsy (ESWL), and percutaneous nephrolithotripsy (PNL), respectively.

Conclusions

The stone sizes were relatively small and only 8.1% of the patients required urological surgery among these patients who visited the emergency room. Only 59.9% of the patients saw urologists after their emergency room visits. We need to be aware that many patients with ureteral stones who are seen in the emergency room are not followed up by urologists.

7. Development and application of a porcine heart tissue model for 2 micron continuous wave laser endoscopic technique training.

Kai Zhang¹, Gang Zhu², Li Ningchen¹, Zhang Xianghua¹, Na Yanqun¹

(1.Peking University Wujieping Urology Center

2.Beijing Hospital , China)

Objective

To develop and evaluate a porcine heart tissue model for 2 micron continuous wave

laser endoscopic technique training.

Methods

Defrozen porcine heart was used as the training tissue model and fixed in the training box. 10 junior surgeons without laser benign prostatic hyperplasia (BPH) treatment experience were involved in the evaluation training study. The training program was in two stages. In each stage, the trainees used 26 French laser resectoscope and performed laser resection and vaporization of left ventricle chorda tendineae cordis separately. The continuous irrigation with physiologic saline solution ensured good visibility. Before the 1st and the 2nd training stage, the trainees were trained with theory and technique by an experienced trainer who was using 2 micron laser prostate resection and vaporization in the treatment of BPH. Time consumed in each technique and sum of resection and vaporization time was recorded for further analysis.

Results

This animal model had plentiful space in porcine left ventricle for precise resection and vaporization technique training. The training model was friendly used by Trainees. The two stage training was conducted smoothly without risk event. There were two trainees missed the second stage training and 8 groups of comparative data were collected. The first stage resection time, vaporization time and sum of resection and vaporization time were $166\pm 94s$, $224\pm 81s$, $390\pm 145s$; The second stage resection time, vaporization time and sum of resection and vaporization time were $75\pm 28s$, $105\pm 28s$, $180\pm 46s$. Compared with the first stage, there was significant improvement in terms of resection time, vaporization time and sum of resection and vaporization time ($P<0.01$) in the 2nd stage.

Conclusion

The establishment and application of defozen porcine heart as the 2 micron continuous wave laser endoscopic technique animal tissue training model is feasible. By using this model, trainees could improve their basic techniques, such as resection and vaporization technique.