WELCOME MESSAGE
FROM THE 29th ANNUAL MEETING OF APEC CHAIRMAN

It is my great honor to chair the 29th Annual Meeting of the Asia-Pacific Endocrine Conference (APEC) on March 16th and 17th, 2018 at the Melia Hotel Hanoi, in Hanoi, Vietnam.

The first APEC was held in Singapore in 1988. Since then, we have held this academic conference in many different countries in the Asia-Pacific area.

The aim of APEC is to allow Japanese and international endocrinologists to gather for the purpose of sharing research findings and debating new concepts in the diagnosis and clinical management of endocrine disease. Moreover, APEC aims to contribute to clinical and scientific development in this field of medicine and to give Japanese physicians the chance to build friendships with endocrinologists from other Asian counties. It is also a great opportunity for young Japanese doctors to improve their presentation skills in English at an international conference.

The 29th APEC will be jointly hosted by Bach Mai Hospital, Friendship Hospital, and Medical Hospital for Army, flagship hospitals in Hanoi, Vietnam, in collaboration with the Vietnam and Hanoi Societies of Diabetes and Endocrinology. I would like to express my sincere gratitude to my Co-chairman, Dr. Do Trung Quan (Associate Professor of Hanoi Medical University, President of the Hanoi Society of Diabetes and Endocrinology), and Honorary Chairman, Dr. Thai Hong Quang (Professor of Medical University for Army, President of the Vietnam Association of Diabetes and Endocrinology) for kindly agreeing to jointly host this event. It is my hope that this conference will further deepen the friendship between Vietnamese and Japanese physicians.

On top of these academic merits, I can assure you that the 29th APEC conference will be a memorable experience in Hanoi, the capital of Vietnam, known for World Heritage-listed sites, including the aesthetic landscape of HaLong Bay. We look forward to seeing you there.

The 29th APEC Chairman
Kazuo Shimizu, M.D., F.A.C.S.
Honorary President of Kanaji Hospital
Honorary Professor of Nippon Medical School

The 29th Annual Meeting of
Asia-Pacific Endocrine Conference
The 29th APEC MEETING ORGANIZING COMMITTEE MEMBERS

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Mayumi Goto, M.D. (Japan) Kanaji Hospital
Nguyen Khoa Dieu Van, M.D. (Vietnam) Hanoi Medical University, Bach Mai Hospital
Nguyen Thy Khue, M.D. (Vietnam) Hanoi Medical University, Bach Mai Hospital
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COMMITTEE OF THE ASIA-PACIFIC ENDOCRINE CONFERENCE SOCIETY

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The 29th Annual Meeting of Asia-Pacific Endocrine Conference
THE ASIA-PACIFIC ENDOCRINE CONFERENCE (APEC) SOCIETY

OBJECTIVES:
To promote research related to endocrinology.
To provide an international venue for junior* researchers to present their findings in English.
To provide an opportunity for international senior researchers to present their achievements and implications.
To provide a venue for researchers in endocrinology from Asia-Pacific countries to meet, share, and develop collaborative endeavors.

*Person who has graduated from medical school in the last decade.

REGULATIONS:
There are no specific requirements to qualify for membership in the Society.
The Society’s Board shall consist of a Chair, Directors, Standing Directors, and a General Secretary.
The Chair, Directors, Standing Directors, and General Secretary shall be elected by the members of the Board.

OPERATION OF THE SOCIETY:
The conduct of the Society shall be determined at Board meetings convened by the Chair.

APEC:
The conference shall be held in Asia-Pacific countries other than Japan when it conflicts with similar meetings in Japan.
GENERAL INFORMATION

The 29th APEC meeting is to be held with the intention that endocrinologists from the Asia-Pacific countries will present, discuss, and exchange information about their achievements. The primary aim will be to promote progress in the field of endocrinology, especially by young researchers who may be new to the international community of endocrinology. The participants will also have the opportunity to develop collegial relationships through mutual interests in endocrine research.

1. DATE AND VENUE
   Date: March 16-17, 2018
   Venue: The Melia Hotel Hanoi
           44B Ly Thuong Kiet Street, Hanoi, Vietnam
           TEL: +84-4-39343343 FAX: +84-4-39348688

2. OFFICIAL LANGUAGE
   The official language of the conference will be English.

3. SESSION SCHEDULE
   March 16th (Fri)
   8:00 ~ 11:00 Registration
   16:30 ~ 17:00 Committee Meeting
   18:00 ~ Welcome Party

   A bus will be available between the Melia Hotel Hanoi and the Welcome Party location. It will depart from the hotel at 17:45. Please wait at the first-floor lobby until 17:30.

   March 17th (Sat)
   8:00 ~ Registration
   8:55 ~ 9:00 Opening Remarks
   9:00 ~ 16:25 Scientific Meeting
   16:30 ~ Closing Remarks
   18:00 ~ Farewell Party
4. REGISTRATION
On the 16th (Friday), the registration desk (APEC desk) will be located in the grand-floor lobby of the Melia Hotel Hanoi from 8:00 to 11:00 am.

On the 17th (Saturday), the registration desk (APEC desk) will be open from 8:00 AM in the first-floor at the Grand Ballroom of the Melia Hotel Hanoi.

5. REGISTRATION FEE
The Organizing Committee confirmed that the registration fee for Japanese participants will be as follows:
Participants: 40,000 Yen
Resident and Accompanying Persons: 20,000 Yen
12 years old or younger: Free
Non-Japanese Participants: VND 1,000,000 (US$50.00)
Non-Japanese Resident and Accompanying Persons: VND 1,000,000 (US$50.00)
*Credit cards not accepted

6. INSTRUCTIONS FOR PRESENTERS
All scientific papers will be presented orally in English.
All presentations should be converted to Windows Power Point format and saved on a CD-ROM or USB Flash Drive.
Please use basic fonts (Arial, Century, Times New Roman, etc.).
You can bring your own computer with a D-Sub port.
All speakers are asked to submit their presentation at the registration desk on March 17 (8:00~11:00 am).
The time allocated for each speaker will be as follows;
Special Lecture Session: 20 min. for presentation
Mini Lecture Session: 15 min. for presentation
Free paper Session: 6 min. for presentation and 3 min. for questions and answers
*All Presenters are requested to submit Power Point slide presentations at the registration desk at least 30 min. prior to your presentation.

7. DRESS CODE
Conference: Formal (lack of a necktie will be acceptable)  Party: Casual

8. OFFICIAL TRAVEL AGENT
Kengo Suzuki
(Tokyo Corporate East Division West Tobu Top Tours Co. Ltd)
4th Floor, Setou Kaikan, 5-7 Sanban-cho, Chiyoda-ku,
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The 29th Annual Meeting of Asia-Pacific Endocrine Conference

**TIME SCHEDULE**

**March 16th (Fri)**

8:00～11:00  Registration  
(At the grand floor lobby of the Melia Hotel Hanoi)

18:00～  Welcome Party  
(LY CLUB HANOI)  
04 Le Phung Hieu Street, Trang Tien Ward, Hoan Kiem District, Hanoi  
TEL: 84-4-3936309

*The departure will be at 17:45  
Please wait at the 1st floor lobby until 17:30

**March 17th (Sat)**

8:00～  REGISTRATION OPENING  
(At Grand Ballroom, the Melia Hotel Hanoi)

8:55～9:00  OPENING REMARKS  
Kazuo Shimizu

9:00～9:50  THYROID 1  
Chairperson: Yasushi Noguchi  
Kiyomi Y. Hames

1. Huge axillary lymph node metastasis due to anaplastic thyroid carcinoma: A case report  
   Nippon Medical School  
   Marie Sanada

2. Usefulness of stereotactic radiotherapy using CyberKnife for patients with inoperative locoregional recurrences of differentiated thyroid cancer  
   Ito Hospital  
   Takayuki Ishigaki

3. I-131 1.1GBQ (30mCi) ablation for the treatment of high-risk thyroid cancer  
   Tokyo Medical University  
   Hidemitsu Tsutsui
4. Evaluation of radio iodine avidity in patients with metastatic papillary cancer  
   Noguchi Thyroid Clinic and Hospital Foundation  Yasushi Noguchi

5. Targeted next-generation sequencing for thyroid carcinoma  
   Hokuto Hospital  Nobuyuki Bando

9:50~10:10  BREAST  
   Chairperson: Hideaki Ogata

6. Postoperative prognostic factor in breast cancer in patients ≥75 years: A retrospective single-center analysis  
   Toho University  Hideaki Ogata

7. Fluorescent endoscopic breast surgery improve aesthetics of breast conserving therapy  
   International University of Health and Welfare, School of Medicine  Koji Yamashita

10:10~10:25  MINI LECTURE 1  
   Chairperson: Wataru Kitagawa

Clinical and pathological issues on a new category of thyroid neoplasms  
   Nippon Medical School  Shoko Kure

10:25~10:40  COFFEE BREAK

10:40~11:30  THYROID 2  
   Chairperson: Hidemitsu Tsutsui  Thai Hong Quang

8. A Report of Four Cases of Carcinoma Showing Thymus-like Differentiation (CASTLE)  
   Ito Hospital  Kiyomi Y. Hames

9. Tracheal compression caused by diffuse goiter in Graves’ disease  
   Ito Hospital  Tomoaki Tanaka
10. Clinical and Metabolic features of thyrotoxic periodic paralysis  
    Bach Mai Hospital  
    Nguyen Quang Bay

11. A newly developed assay for thyroid stimulating antibodies (TSAb) are highly prevalent in Graves’ ophthalmopathy  
    Kanaji Hospital  
    Shinya Ishii

12. Clinical features and investigations of patients with primary hyperparathyroidism  
    Bach Mai Hospital  
    Khoa Dieu Van Nguyen

11:30~11:50 SPECIAL LECTURE 1  
    Chairperson: Nguyen Thy Khue

    Management of thyroid nodules which is incidentally found in ultrasound and PET-CT  
    Toranomon Hospital  
    Megumi Miyakawa

11:55~13:00 LUNCH (Function Room)

13:00~13:20 SPECIAL LECTURE 2  
    Chairperson: Naokatsu Saeki

    Diabetes in Vietnam: Challenges/Deficiency in Management  
    Ho Chi Minh City Medical Association  
    Nguyen Thy Khue

13:20~13:50 DIABETES MELLITUS 1  
    Chairperson: Shinya Ishii

13. Evaluating insulin resistance in prediabetes patients  
    Bach Mai Hospital  
    Lam My Hanh

14. Depressive symptoms and related factors in elderly diabetic patients at a national geriatric hospital  
    Hanoi Medical University  
    Block H.T.V. Vu
15. Investigation of glycemic control outcome and incident of hypoglycemia in type 2 diabetes mellitus patients with end-stage renal disease
Vietnam Military Medical University Hoang Trung Vinh

13:50~14:05 MINI LECTURE 2
Chairperson: Yoshitaka Tsuji
Cardiometabolic risk factors in Vietnamese men on vegetarian diet
Hue University of Medicine and Pharmacy Nguyen Hai Thuy

14:10~14:30 DIABETES MELLITUS 2
Chairperson: Tran Huu Dang

16. Effectiveness of SGLT2 inhibitors in two obese patients with diabetes
Kanaji Hospital Hiroyuki Onose

17. Fibrocalculous pancreatic Diabetes Mellitus
Hue University of Medicine and Pharmacy Tran Huu Dang

14:30~14:45 COFFEE BREAK

14:45~15:00 MINI LECTURE 3
Chairperson: Yasuaki Harabuchi
Robot-assisted thyroidectomy in Japan
NewHeart Watanabe Institute Norihiko Ishikawa

15:05~15:35 THYROID 3
Chairperson: Akihiro Katayama

18. VANS-3S method as a low-cost video-assisted thyroid surgery for various thyroid diseases
Sapporo Tokushukai Hospital Akihiro Katayama

19. The launch of endoscopic thyroidectomy
Nagoya Daiichi Red Cross Hospital Takahisa Hiramitsu
20. Video-assisted thyroidectomy (VANS method) for early-stage carcinoma
   Asahikawa Medical Hospital          Kenichiro Nomura

15:35~15:55  PITUITARY

   Chairperson: Takumi Abe

21. A case of lymphocytic adenohypophysitis triggered by post partum vision
    impairment
   Toho University Faculty of Medicine    Naoki Hiroi

22. Organization of a training model and system for skull base closure with
    suturing in endonasal surgery
   Jikei University School of Medicine    Yudo Ishii

15:55~16:25  ADRENAL

   Chairperson: Do Trung Quan
               Tetsuro Tamura

23. Glucocorticoid-induced adrenal insufficiency in Vietnam
    University of Medicine and Pharmacy at Ho Chi Minh city    Tran Quang Nam

24. Lymph node metastasis of adrenocortical cancer treated with chemotherapy followed by lymph node dissection
    Niigata Prefectural Center Hospital    Akiyoshi Katagiri

25. A Case with central hypoadrenalism who showed an anaphylactic reaction to intravenously administered hydrocortisone succinate
    Niigata Prefectural Central Hospital    Tetsuro Tamura

16:30~  CLOSING REMARKS
        Do Trung Quan

18:00~  FAREWELL PARTY
SPECIAL LECTURE 1

Management of thyroid nodules which is incidentally found in ultrasound and PET-CT

Megumi Miyakawa

Endocrine Center, Toranomon Hospital

Thyroid incidentalomas are commonly found on cross-sectional imaging of the neck and the prevalence of thyroid incidentalomas in patients without suspected thyroid disease is 10~67% on neck ultrasonography (US). Among the modern imaging modalities, high-resolution US is the most sensitive diagnostic modality for the detection of the thyroid nodules and US is the mainstay for detecting and making the differential diagnosis of thyroid nodules as well as for providing guidance for a biopsy. In the guideline of Japan Thyroid Association, the diagnostic criteria of US (B mode) for the malignant thyroid nodules is listed as follows. 1)shape: irregular and taller than wide, 2)ill-defined margin, 3)internal echo: hypoechoic and inhomogeneous, 4)microcalcification. Conversely, a nodule with multiple microcystic spaces separated by thin septa (a 'spongiform' appearance) is regarded as a benign nodule.

Color Doppler US or power Doppler US can be used for the evaluation of the intratumoral vascularity of thyroid nodules. Although intratumoral hypervascularity is commonly observed in thyroid carcinomas, it is a nonspecific finding. According to our previous study, the resistive index(RI) and pulsatility index(PI) on Doppler US help to differentiate benign and malignant nodules.

Recently, the clinical importance of incidental focal or diffuse uptake by fluorine-18 fluorodeoxyglucose (F-FDG) in the thyroid gland on PET/CT has come to be recognized. We evaluated the additive value of thyroid US in defining the malignancy potential of thyroid incidentalomas. For 3 years from January 2014 to January 2017, 8164 patients underwent FDG-PET/CT in our institution. Among them, 131 patients (1.6%) had thyroid uptake (nodular lesions:65 cases and diffuse lesions:66 cases). All patients with nodular lesions underwent US examination and if necessary, fine needle aspiration cytology (FNAC) were performed to these patients. Among patients who had focal-FDG uptake in the thyroid gland, 13 of 40 (33%) patients were diagnosed as malignancy (13 primary thyroid malignancy and one metastasis to thyroid). Although the difference between the maximum standardized uptake value (SUVmax) of malignant and benign nodules was not statistically significant (6.9±5.9 vs. 5.9±8.6, P=0.248), the nodule sizes of malignant nodules were statistically significant (12.5±5.7 vs.25.3±15.8, P<0.001). According to the previous reports, focal F-FDG uptake with high SUVmax (>5.5~5.3), suspicious US findings, and a high elastography score (≥4) is considered malignancy.

In conclusion, a combination of US characteristics, such as a taller than wide shape, or irregular margins, hypoechoic solid mass, or microcalcifications, or absence of elasticity—will probably identify nodules with an increased risk for malignancy. But, fine needle aspiration cytology (FNAC) should be used selectively to avoid over-diagnosis and over-treatment.
Education
1977  M.D., Tokyo Women’s Medical College, Tokyo, Japan
1984  Ph.D., Tokyo Women’s Medical College, Tokyo, Japan

For the paper entitled: Effect of Growth hormone and insulin on the generation of somatomedin by perfused rat liver

Professional Training and Employment
1977  Clinical Resident for internal medicine, Tokyo Women’s Medical College
1980  Instructor, Department of Internal Medicine II, Tokyo Women’s Medical College
1989  Assistant Professor, Department of Medicine, Institute of Clinical Endocrinology, Tokyo Women’s Medical College
2004  Health Care Center, Toranomon Hospital
2005  Part-time Assistant Professor of the University of Tokyo School of Medicine, Tokyo, Japan
2009  Director of Endocrinology and Metabolism, Toranomon Hospital

License and Certification
1977  Japanese National Board, Physician’s License: No.237383

Honors/Awards
1997  Okamoto’s Physicians’ Scholarship
      For the research of Signal transduction mechanisms in thyroid cell proliferation

Membership of Academic Society
1977  Japanese Society of Internal Medicine
1978  Japanese Endocrine Society
1987  Japanese Thyroid Society
1989  Japan Society of Ultrasonics in Medicine
1992  Japanese Diabetes Society
SPECIAL LECTURE 2
Diabetes in Vietnam: Challenges/Deficiency in Management

Nguyen Thy Khue
Ho Chi Minh City Medical Association

As in other developing countries, Vietnam has gone through rapid demographic and economic transition. More than 7% of the general population aged 65 years or above, and this proportion is increasing. In parallel with the economic development, the population health is in a transitional state with dramatic shift in lifestyles. There was a huge change in dietary habits, more people eating out, the average intake of protein and fat increased from 1985 to 2010, while the intake of vegetables and fruits remained the same.

A national survey in 2002 showed that 2.7% of individuals aged 30-64 years had DM; the prevalence of DM has increased to 5.4% in 2012. The rate of obesity in children also increased especially in the urban and semi-urban areas.

The cost of treatment increases with the frequency of complications, with the largest cost component being spent in patients with infected foot ulcers, end-stage renal disease and hemodialysis. The current cost of hospitalization due to diabetes is 2.2 times higher than the average salary of government employees and 6.8 times higher than the minimal salary. Although in 2017, 80% of the population has health insurance, there is still a gap between large cities and remote areas in terms of diabetes care, leading to reduced adherence.

There were some indications of improvement in glycemic control in the general community. A 1998 survey in Vietnam observed that the mean HbA1c was 8.8%, and this was reduced to 7.8% in 2012. Nevertheless, only 36% of patients reached treatment target.

Diabetes is now recognized as a public health burden in Vietnam. During the past two decades, Vietnam has made a lot of efforts to prevent and manage diabetes throughout the country. The efforts have resulted in major progresses in the containment of the disease in the general population, but several challenges still remain.
Nguyen Thy Khue, M.D.

**Present Position:** Associate Professor Emeritus, Department of Endocrinology, University of Medicine and Pharmacy, Ho Chi Minh City
Immediate Past President of The Vietnam Association of Diabetes and Endocrinology
President of HCMC Diabetes and Endocrinology Association
Vice President of HCMC Medical Association
Member of The Endocrine Society, United States

**Educational Background & Professional Experiences:**

**Present Occupation:** Associate Professor Emeritus HCMC City University of Medicine and Pharmacy. Senior Consultant Hospital 115 HCMC. Head of Endocrinology Division, MEDIC HCMC

1974 Saigon Medical School (Year of graduation)
1974-1975 Saigon Medical School (Post graduate training program organized by Saigon Medical School and University of Oklahoma, USA)
Degree: MD, PhD in Ho Chi Minh City Medical School
Specialty: Internal Medicine. Endocrinology and Diabetes
1994-1998 Deputy Head of Department of Endocrinology, HCMC University of Medicine and Pharmacy
1998-2009 Head of Department of Endocrinology, HCMC University of Medicine and Pharmacy

Publication in local journal: 60
MINI LECTURE 1
Clinical and pathological issues on a new category of thyroid neoplasms

Shoko Kure

Department of Integrated Diagnostic Pathology, Nippon Medical School

In the latest WHO Classification of Tumours of Endocrine Organs published in 2017, a new category “other encapsulated follicular-patterned thyroid tumors” was introduced. This category includes “well-differentiated tumor of uncertain malignant potential,” “follicular tumor of uncertain malignant potential,” and “non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).” NIFTP is defined as “non-invasive neoplasm of thyroid follicular cells with a follicular growth pattern and nuclear features of papillary thyroid carcinoma (PTC).” For the definite diagnosis of NIFTP, several pathological features need to be identified; they are 1) encapsulation or clear demarcation of the tumor, 2) follicular growth pattern, 3) nuclear features of PTC, which are determined by size, shape, membrane irregularities, and chromatin characteristics, 4) absence of invasion, 5) absence of necrosis, and 6) low mitotic activity. Mutations of RAS family genes are frequent, and BRAF V600E or RET fusions are uncommon. The malignant potential is very low, and the cases follow a favorable clinical course. The incidence of NIFTP in PTC is much higher in western countries than that in Asian countries. This may be due to observer variation and/or ethnic difference. Correct diagnosis is necessary for an appropriate treatment and for the elucidation of biology of NIFTP in Asian people.
Shoko Kure, M.D.

2008.3  Nippon Medical School, Tokyo, Japan
2008.4-2009.3  Research fellow, Dana-Farber Cancer Institute, Department of Medical Oncology, Boston, USA
2009.4-2011.3  Clinical resident, Ibaraki Medical Center, Tokyo Medical University, Ibaraki, Japan
2011.4-2015.3  Graduate School of Nippon Medical School, Department of Integrative Oncological Pathology, Tokyo, Japan
2015.4-2017.3  Postdoctoral fellowship, Department of Integrative Diagnostic Pathology, Nippon Medical School, Tokyo, Japan
2017.4-Present  Assistant professor, Department of Integrative Diagnostic Pathology, Nippon Medical School, Tokyo, Japan

LICENCES: Full medical license (Japan), Diagnostic pathology, Diagnostic cytology

RESEARCH: Fine needle aspiration cytology in post Chernobyl thyroid cancer
Molecular pathological epidemiology in colorectal cancers
Expression of cancer stem cell markers in pancreatic intraepithelial neoplasias and pancreatic ductal adenocarcinomas
Analysis of the significance of the cytology, protein and genetic features in thyroid tumor
Genetic alterations in young adults' thyroid cancers

AWARDS: 2013 Homes Scholarship, Society of University Women Students, Tokyo, Japan
"Analysis of the significance of the cytology, protein and genetic features in thyroid tumors"
2017 Research grant for young researcher, Nippon Medical University
"Analysis of genetic alterations in thyroid cancers in young patients"
2017 Research grant, Children's Cancer Association of Japan, Tokyo, Japan
"Analysis of genetic alterations in thyroid cancers in young patients"
Mini Lecture 2

Cardiometabolic risk factors in Vietnamese men on vegetarian diet

Nguyen Hai Thuy, Le Van Chi, Nguyen Thi Kim Anh, Nguyen Hai Quy Tram, Nguyen Hai Ngoc Minh

Hue University of Medicine and Pharmacy

Background: Cross-sectional studies have shown that vegetarian diet has beneficial effects on the prevention of cardiovascular diseases. However, whether long-term vegetarian diet would potentially be a cardio-metabolic risk factor are still unclear. Objectives: The current study aims to investigate the influence of long-term vegetarian diet on cardio-metabolic risk factors, and importance on plasma levels of testosterone and leptin among vegetarian males in Vietnam. Methods: We screened for cardio-metabolic risk factors of 93 Vietnamese males (age 16-78 years) with duration of vegetarian diet ranged from 5-65 years, 86 non-vegetarian men (age 17-72 years) were recruited as control group. The cardio-metabolic risk factors were assessed including BMI, WC, blood pressure, fasting glucose, HbA1c, fasting insulin, HOMA-IR, lipid profile, serum levels of hsCRP, Leptin and Testosterone.

Results: Vegetarian group had lower prevalence of metabolic syndrome compared to those in non-vegetarians, (12.9% vs 24.4%, p <0.01), lower serum hsCRP concentration (0.85 ±0.94 vs 4.21 ±5.73 mg/l, p < 0.05), lower serum total cholesterol (4.05 ± 0.92 vs 5.21 ± 1.21 mmol/l, p<0.01), lower LDL.C (2.07 ± 0.72 vs 3.39 ± 1.09 mmol/l, p<0.01), lower non-HDL.C (2.88 ± 0.96 vs 4.04 ±118 mmol/l, p<0.01), lower TC/HDL.C ratio (3.62 ± 1.18 vs 4.67 ± 1.33, p<0.01), and lower LDL.C/HDL.C ratio (1.86 ± 0.81 vs 3.06 ± 1.15, p<0.05), respectively. In contrast, serum Testosterone level was higher in vegetarian males (6.37 ±1.78 vs 5.29 ± 2.38 ng/ml, p=0.008). Between the vegetarian and non-vegetarian men, there were no differences in BMI (22.13 ± 3.59 vs 22.56 ± 2.88, p>0.05 ), in WC (77.61 ±8.62 vs 79.76± 7.14 cm, p>0.05), in SBP (116.88±12.20 vs 122.31±13.77 mmHg, p>0.05), in DBP (122.31±13.77 vs 77.76±10.00 mmHg, p >0.05), in fasting glucose ( 4.65 ± 0.53 vs 5.05 ± 0.68 mmol/l, p > 0.05), in fasting insulin (5.85 ± 4.53 vs 5.93 ± 3.2 µU/ml, p>0.05), in HOMA-IR (1.25 ±1.18 vs 1.25 ±1.18, p>0.05), in TG (1.81 ± 1.04 vs 2.03 ± 1.16 mmol/l, p >0.05), in HDL.C (1.17 ± 0.25 vs 1.17 ± 0.31 mmol/l , p >0.05), and in TG/HDL.C (1.71 ± 1.26 vs 1.88 ± 1.25, p >0.05), respectively. Compared to non-vegetarian group, the vegetarian one had lower serum concentration of leptin (1.46± 1.48 vs 3.16 ±2.95 ng/ml, p < 0.01), higher HbA1c level (5.51± 0.71 vs 4.96 ±0.69%, p < 0.01) and higher prevalence of prediabetes based on HbA1c ≥ 5.7 % (36% vs 5.8%, p < 0.01), respectively. There was a correlation between HbA1c level with age, duration of vegetarian diet, BMI, WC, TG, leptin and testosterone levels; in which the vegetarian duration was identified as an independent risk factor of hyperglycemia by multiple regression analysis. The vegetarian duration cut-off point for prediabetes analyzed by ROC was 21 years and the age cutoff point for prediabetes was 35 years old, which was younger than in non vegetarians (46 years old). Conclusions: A decrease in multiple cardio-metabolic risk factors such as BMI, blood pressure and lipid profile was associated with vegetarian diet. However, long-term vegetarian diet could cause hyperglycemia and hypoleptinemia. Those effects appeared to be correlated with the vegetarian duration (more than 21 years).

Keywords: vegetarian diet, duration of vegetarian diet, cardio-metabolic risk factors.
Keywords appeared to be correlated with the vegetarian duration (more than 21 years). The term vegetarian diet could cause hyperglycemia and hypoleptinemia. Those effects blood pressure and lipid profile was associate with age, duration of vegetarian diet, BMI, WC, blood pressure, fasting glucose, HbA1c, fasting insulin, HOMA IR, lipid profile, serum levels of hsCRP, Leptin and Testosterone.

Between the vegetarian and non-vegetarian group, the vegetarian one had lower serum concentration of leptin (36% vs 5.8%, p < 0.01), respectively. There was a correlation between HbA1c level (1.46 ± 1.48 vs 1.67 ± 1.50, p>0.05), in HOMA IR (1.25 ±1.18 vs 1.25 ±1.18, p>0.05), in TG (1.81 ± 1.04 vs 2.03 ± 1.15, p<0.05), respectively. In contrast, serum Testosterone concentration (0.85 ±0.94 vs 4.21 ±5.73 mg/l, p < 0.05), lower serum total cholestrol to those in non-vegetarians, HDL.C (1.71 ± 1.26 vs 1.88 ± 1.25, p >0.05), respectively.  Compared to non-vegetarians, serum triglycerides were higher (22.13 ± 3.59 vs 22.56 ± 2.88, p>0.05 ), in WC (77.61 ±8.62 vs 79.76± 7.14 cm, p>0.05).

The 29th Annual Meeting of
Asia-Pacific Endocrine Conference
MINI LECTURE 3
Robot-assisted thyroidectomy in Japan
Norihiko Ishikawa
Department of Endocrine Surgery, NewHeart Watanabe Institute

Background: We performed gasless transaxillary robot-assisted thyroidectomy with a novel camera-port retractor and a double energy-device technique. We describe the new instrument and these efficacies, which was evaluated by performing robot-assisted thyroidectomy.

Methods: From 2009, we underwent robot-assisted thyroidectomy using the da Vinci surgical system. The camera-port retractor was used, and we use the micro-bipolar forceps and an ultrasonic device on the robotic arms for dissection of the surrounding tissues as well as for cutting and coagulation to avoid injury to the vessels and nerves.

Result: The camera port retractor provided excellent visualization without impinging on the robotic arms. And the double energy-device technique is very useful for dissecting and hemostasis of oozing and bleeding.

Conclusion: The novel retractor is useful and safe, and the double energy-device technique is an effective option for robotic dissection around nerves in robot-assisted thyroidectomy.
EDUCATIONAL HISTORY
1995-1998 Ph.D., Kanazawa University Graduate School of medical Science, Kanazawa
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2014-Present Director in Dept. of Endocrine and Thoracic Surgery and Dept. of Robotic Surgery,
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MINI LECTURE
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THYROID 1

Huge axillary lymph node metastasis due to anaplastic thyroid carcinoma: A case report

Marie Sanada, Ryuta Nagaoka, Tomoo Jikuzono, Ritsuko Okamura, Takehito Igarashi, Haruki Akasu, Iwao Sugitani, Kazuo Shimizu

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Introduction: Papillary and anaplastic thyroid carcinoma often metastasizes to the lymph nodes, mainly to the cervical and mediastinal regions. But, metastasis to the axillary lymph node is extremely rare.

Case report: An 89-year-old male initially received total thyroidectomy and radioactive iodine ablation for papillary carcinoma of the thyroid 26 years ago. Afterwards, he had received radical neck dissection twice and external beam radiation therapy for the recurrent tumor in the neck. He was referred to our department due to the palpable right axillary mass. There was a large (over 6 cm) and firm mass in the right axilla. Blood test showed elevated thyroglobulin (816.6 ng/ml) and leukocytosis (WBC: 13300 /μl). Computed tomography scan showed multiple distant metastases to the lung. Right axillary dissection was performed. Pathological examination revealed that metastatic anaplastic carcinoma coexisted with papillary thyroid carcinoma component. One month after the surgery, he died from multiple metastases to the lung, bone and brain.

Summary: We experienced a case of anaplastic thyroid carcinoma transformed from papillary thyroid carcinoma in the axillary lymph node. We were able to preoperatively assume the tumor to be anaplastic cancer because of its size and the rapid growth.
Usefulness of stereotactic radiotherapy using CyberKnife for patients with inoperable locoregional recurrences of differentiated thyroid cancer

Takayuki Ishigaki, Takashi Uruno, Tomoaki Tanaka, Yuna Ogimi, Chie Masaki, Junko Akaishi, Kiyomi Y. Hames, Akifumi Suzuki, Chisato Tomoda, Kenichi Matsuzu, Keiko Ohkuwa, Wataru Kitagawa, Mitsuji Nagahama, Kiminori Sugino, Koichi Ito

Department of Surgery, Ito Hospital

Background: Although most patients with differentiated thyroid cancer (DTC) have a favorable prognosis, some patients with repeated regional recurrence and distant metastasis are known to have poor outcomes. Surgical resection of the recurrence is the preferred treatment for locoregional recurrence, such as lymph node (LN) metastasis. However, some recurrences are unresectable because of their aggressive invasion to adjacent organs, or severe adhesions after repeated surgeries. The therapeutic value of radioactive iodine therapy and conventional external beam radiotherapy for LN recurrences are also known to be limited. The objective of the present study was to investigate the feasibility and efficacy of stereotactic radiotherapy (SRT) as salvage treatment for locoregional recurrence of DTC. Patients and Methods: Between August 2011 and October 2017, 21 locoregional recurrent lesions in thirteen patients with recurrent DTC were treated by SRT using the CyberKnife system. Information on the adverse events and resultant symptoms associated with SRT were retrospectively collected from the patients’ medical records. Seventeen of the 21 lesions could be evaluated for therapeutic effectiveness by follow-up CT scanning, and response was assessed using the RECIST criteria. Results: Eleven patients had papillary carcinoma (PTC) and two had follicular carcinoma (FTC). Two of eleven PTCs contained poorly differentiated components. Fourteen lesions were in the cervix, six in the mediastinum and one was axillary. SRT was delivered in one to three fractions, and the median dose was 30 Gy (range 20.0-40.0 Gy). No serious adverse events were observed in any patient, although there was one patient who developed panic disorder following treatment as the trigger. The median follow-up period of seventeen lesions was 43 months (range 3-76 months). No local progression was observed at the final evaluation in any of the lesions treated by SRT. Complete response (CR), partial response (PR), and stable disease (SD) were seen in five, four and eight patients, respectively. Conclusion: SRT using the CyberKnife system was found to be a feasible and effective treatment to suppress the growth of locoregional recurrence of DTC.
THYROID 1

I-131 1.1 GBQ (30mCi) ablation for the treatment of high-risk thyroid cancer

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2. Kanaji Hospital

Introduction: In 2009, maximum administration dose of I-131 for outpatients was increased to 1.1GBq (30mCi), making ablation possible at facilities without an isolation room. Ablation with low-activity doses of 30mCi is performed on high-risk patients of differentiated thyroid cancer in Japan, which is rare in other countries.

Patients and Methods: One hundred and thirty patients from 2009 to 2014 with high-risk papillary thyroid cancer who underwent total thyroidectomy followed by 30mCi ablation were included. Successful ablation was determined when I-131 uptake in the thyroid bed did not appear in whole-body scintigraphy, 6 to 12 months after ablation. For unsuccessful cases, additional administration of 30mCi of I-131 was performed. As pre-treatment for TSH elevation, thyroid hormone withdrawal (THW) was performed consistently during the initial period (until May 2012, THW group), and rhTSH was administered during the latter period (June 2012-Dec 2015, rhTSH group).

Results: Ninety-nine out of 130 cases (76%) of high-risk papillary thyroid cancer was assessed as successful after the initial administration of 30mCi. There was no difference in success rate between the 2 groups. Thirty-two unsuccessful cases were given a second administration of 30mCi, resulting in 20 successful cases (63%).

Conclusion: Success rate of I-131 30mCi ablation for high-risk papillary thyroid cancer was 76%, and it increased to 92% when an additional 30mCi was administered. These results showed 30mCi low-dose ablation is effective even for the high-risk papillary thyroid cancer group.
**THYROID 1**

**Evaluation of radio iodine avidity in patients with metastatic papillary thyroid cancer**

Yasushi Noguchi

Noguchi Thyroid Clinic and Hospital Foundation
Dept. of Radiology and Nuclear Medicine

**Aims:** Patients with radio-iodine avid lesions are more likely to benefit from radio-iodine therapy. The aim of this study is to define characteristics of patients who will benefit from RIT for distant metastasis of papillary thyroid cancer (PTC) by using avidity rates (AR) of the metastatic lesions.

**Methods:** From January 2007 to December 2016, 136 adult cases of initial RIT for distant metastasis of PTC were performed. The total group had 27 male, 109 female, average age of initial surgery (IS) was 52.9. The total group was divided into three groups by age of IS: 21-40, 41-60 and over 61, and were also divided by the interval of 24 month for initial RIT. AR were compared.

**Results:** The total group had only 23.5% in AR, but the group which had RIT within 24 month had AR of 39.6% and was significant compared to those after 24 month (AR 13.3%, p<0.01). In each age group, the AR was 21-40:46.3%, 41-60:15.8% and over 61:12.3%. With each age group divided by interval of 24 month, AR were higher when treated earlier (21-40:62.5% vs 36.0%, 41-60:55.6% vs 3.4%, over 61:21.4% vs 3.4%). Significance in AR was only seen in the eldest group compared to the youngest group when RIT were given within 24 month (p<0.05).

**Conclusions:** RIT can have benefits for patients with distant metastasis of PTC, especially when RIT is performed within 24 month of IS and younger than 60 of age when IS.
THYROID 1

Targeted next-generation sequencing for thyroid carcinoma

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Background: Thyroid carcinoma has characteristic genetic alterations, including point mutations for proto-oncogenes, copy number alterations (CNA) and chromosomal rearrangements which vary with histological subtypes. Recently, Next-generation sequencing (NGS) technology provides the simultaneous analysis of hundreds of genes of interest, and can improve the diagnostic accuracy and precise personalized treatments. In this study, we detected point mutations with NGS and attempted to correlate genetic alterations with clinical data. Patients and Methods: A total of 50 patients who underwent thyroidectomy between 2014 and 2016 was enrolled. The subject includes 30 patients with papillary thyroid carcinoma (PTC), 2 with papillary ca. tall cell variant (TPTC), 2 with papillary ca. follicular variant (FVPTC), 5 with follicular ca. (FTC), 7 with poorly diff. ca. (PDTC), 1 with anaplastic ca. (ATC). Total DNAs were extracted from formalin-fixed paraffin-embedded tissue sections and quantified. Targeted regions of 24 cancer-related genes were amplified by PCR, barcoded and sequenced using the Illumina MiSeq. Sequence data were mapped onto the online analytical resources for analysis of mutation. CNA was detected by comparing targeted genomic DNA sequence coverage with a process-

Results: BRAFV600E mutation was identified in 25 (83%) of 30 patients with PTC, in 6 (86%) of 7 PDTC, in 2 of 2 TPTC, and in 1 of 1 ATC. PIK3CA mutation was in 3 (delPV104P, A1046T, C420R; 10%) of 30 PTC and 1 (H1047R; 14%) of 7 PDTC. TP53 mutation was identified in 1 (R306*; 3.3%) of 30 PTC and 1 (Q152*; 14%) of 7 PDTC. NRAS mutation was identified in 1 (Q61K, 50%) of 2 FVPTC. EGFR mutation was identified in 1 (K852Q, 3%) of 30 PTC. In PDTC, 7 (100%) had either BRAFV600E mutation or CNA of BRAF and CNA of PIK3CA. Statistical analysis did not show the significant correlation between BRAFV600E mutation and either pathological T and N, stage, tumor size, extrathyroidal invasion or multifocality in PTC. A patient with PTC, who had EGFR and PIK3CA mutation, showed an aggressive course like multiple bone and lung metastasis. Conclusion: The frequency of BRAFV600E mutation in PTC was higher than that in previous reports. BRAFV600E mutation was not correlated with clinical data. We suspect that PIK3CA or EGFR mutation rather than BRAFV600E mutation may be associated with clinical course of patients with PTC. NGS may contribute to our understanding of biological behavior of thyroid carcinoma.
BREAST

Postoperative prognostic factor in breast cancer in patients ≥75 years: A retrospective single-center analysis

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Background: Defining prognostic factor after surgery among older patient with breast cancer is challenging by the lack of level-1 clinical evidence and the heterogeneity of the older population. Limited evidence-based guidelines exist for the caring of this older cohort of patients with breast cancer. We evaluated the postoperative prognostic factor on the survival of older patients with breast cancer.

Subjects and methods: We conducted a retrospective study of breast cancer patients aged 75 years and older who were treated surgically at the Omori Hospital of the Toho University Medical Center in Japan during the period 2000 – 2014. Patient and tumor characteristics, general health status, comorbidity, treatment, and cause of death were documented, and relations between these variables and survival time were assessed. Case records were followed for vital status until patient death, or until December 2015, which was the cut-off date for this study. General health and comorbidity status were assessed by American Society of Anesthesiologists classification (ASA) and Charlson Co-Morbidity Index (CCI Index). Medical compliance of postoperative adjuvant endocrine therapy (adherence) was assessed by medical possession ratio (MPR). Cox regression analysis and propensity score analysis were used to identify variables associated with overall survival time. Results: 221 operations for breast cancer were performed. The median age of the patients was 80 (75-93). During 46.6 month of the median follow-up period, 57 patients died; the death from breast cancer was seen in 23 and other causes in 34. By multivariate analysis, caregiving (HR 2.00, 95% CI 1.12-3.51; p = 0.0194) and stage III (HR 2.56, 95% CI 1.24-5.15; p = 0.0114) were significantly associated with overall survival. Further stage III was related to breast cancer death and caregiving to other causes death except for breast cancer, respectively. Neither postoperative adjuvant endocrine therapy nor postoperative conservative breast radiation was related to survival period. Conclusion: Among surgically treated breast cancer patients age 75 years and older, maintenance of activities of daily living and management of comorbidity is pivotal for improvement of mortality rate. Current treatments after surgery for older population, which are recommended on guidelines, should be re reconsidered.
BREAST

Fluorescent endoscopic breast surgery improve aesthetics of breast conserving therapy

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Background: As the breast conserving surgery for early breast cancer, video-assisted breast surgery (VABS) has been reported to manipulate all performance only through the axillary minimum incision, not to need any wound on the breast skin, and to exceed the aesthetics after surgery. We utilized the fluorescent endoscopic system for VABS to detect a tiny fluorescence of the enhanced tumor from some distance away. We can find the tumor location and the extended area. We get the possibility to minimize the breast resection volume accurately for the better aesthetics. Methods: As sentinel node (SN) biopsy, the location of SN is detected by 3D-CT mammary lymphography before surgery, 0.25% indocyanine green is injected intracutaneously, and SN is detected and biopsied by fluorescent endoscopy. Trans-axillary retromammary approach (TARM) is a single port surgery with an axillary skin incision. The wound length is usually 2.5cm. We cut the mammary gland with clear surgical margin from behind the mammary gland by using tumor enhancement of fluorescence. The postoperative aesthetic results were evaluated by ABNSW. Result: BCS was performed on 450 patients and fluorescent surgery on 20 patients. The operative cost is very low as the conventional one. There was no significant difference in operational infestation. There was no serious complication after surgery. The fluorescent effect can be detected more the 90% of cases, and more than 1 cm distance. It was accurate to recognize the surgical margin and to decrease the resection volume. The original shapes of the breast were preserved well. The postoperative esthetic results were excellent and better. The sensory disturbance was minimal. All patients expressed great satisfaction. Conclusions: VABS can be considered as a best surgical procedure in curability and esthetics. The fluorescent endoscopic surgery will decrease the resection volume and improve the breast aesthetics.
A report of four cases of carcinoma showing thymus-like differentiation (CASTLE)

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Carcinoma showing thymus-like differentiation (CASTLE) is a rare form of neoplasm. It is hypothesized to arise from the branchial pouch, the remnants of the thymopharyngeal duct, or an ectopic thymus. Although there are still few reports of CASTLE, most describe this carcinoma as having a favorable prognosis if the tumor is resected radically. On the other hand, preoperative diagnosis of CASTLE with fine needle aspiration biopsy tends to be complicated by its cytological characteristics. The cytological test only allows us to suspect an atypical type of malignant thyroid cancer. From 2014 to 2016, we diagnosed and treated four cases of CASTLE by performing excision and neck dissection. The patients, three males and one female, had an average age at their initial surgery of 56.5 (44-79). For each patient, ultrasonography revealed a solid hypoechoic tumor located in lower part of the thyroid. Aspiration biopsy cytology suggested the possibility of CASTLE in two cases, atypical malignant cells in one case, and poorly differentiated thyroid carcinoma arising from follicular carcinoma in one case. Core needle biopsy was performed for two cases and conclusively diagnosed CASTLE preoperatively with CD5 staining. We performed radical resection for all four patients. One passed died due to post-operative complications. For the remaining three patients, we recommended radiation therapy. Two pursued this course of treatment, while one opted for only regular outpatient monitoring. Unfortunately, for the latter individual, cervical lymph node metastasis appeared several months after the initial surgery. We review these four cases in relation to reports of CASTLE from other institutions. Preoperative examination results, surgical procedures, postoperative treatment, and prognosis are examined.
THYROID 2

Tracheal compression caused by diffuse goiter in Graves’ disease

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Background: Some patients with Graves’ disease may complain of dyspnea due to tracheal compression caused by a diffuse goiter. Thyroid surgery is needed to improve these symptoms. A case of dyspnea during treatment of a patient with Graves’ disease, in which emergency surgery was needed, is presented. The objective of the present study was to document the frequency and severity of tracheal compression in Graves’ disease patients, and to identify information that would be useful for identifying patients for whom surgical therapy may be more appropriate than continuing antithyroid medications or radioactive therapy.

Materials and Methods: A total of 236 Graves’ disease patients who underwent thyroid surgery between January and December 2015 at Ito Hospital were retrospectively analyzed. Tracheal diameter was examined by computed tomography (CT).

Results: The subjects included 56 men and 180 women (median age at the time of surgery, 39 years; age range, 13-76 years). The median time from the start of treatment with antithyroid medication and surgery was 3.5 years (range, 0.25-39 years). The median thyroid weight and tracheal reduction rate were 63.4 g (range, 11-545 g) and 13% (range: 0-82%), respectively. Only seven patients (3%) had severe tracheal compression (tracheal diameter compressed >50%). Older age, higher body mass index, and resected thyroid volume were identified as independent predictors for tracheal compression on both univariate and multivariate analyses (p<0.05). Sex and the duration of treatment with anti-thyroidal drugs were not identified as having any impact.

Conclusion: The diameter of the trachea in Graves’ disease patients was not very narrow (tracheal diameter compressed not more than 50%). However, some patients had severe tracheal compression with dyspnea. When patients with Graves’ disease are treated medically, those who are obese and/or elderly with diffuse goiter (more than 56 g) should be evaluated for tracheal compression by CT.
Thyroid 2

Clinical and Metabolic features of thyrotoxic periodic paralysis

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Background and aims: Thyrotoxic periodic paralysis (TPP) is commonly misdiagnosed because of atypical symptoms. The aims of this study was to evaluate (1) clinical and (2) paraclinical characteristics of TPP.

Material and methods: We studied 66 Graves patients with hypokalemia, admitted in Dept of Endocrinology, Bach Mai hospital from Jan 2007 to April 2011.

Results: 95.5% of TPP patients is male, mean age was 33.5 years old. Thyrotoxic symptoms: 60.6% had tachycardia; 47% had weight loss; 71.2% had goiter and nearly 20% had eye symptoms. 68.2% of patients had abrupt paralysis, and commonly occured from 8 pm to 6 am. 54.5% of patients had lower extremities paralysis and 45.5% of patients had four extremities paralysis. Proximal muscles are affected more severely than distal muscles. There is no patient with respiratory paralysis. High level of thyroid hormone and hypokalemia were found in all patients. Especially, 65.2% of patients had severe hypokalemia (Potassium level < 2.5 mmol/L). On ECG: U wave is present in 76.1%, and flat/negative T wave is present in 56.5% of patients.

Conclusions: 1). Majority of TPP were young male patients; mean age was 33.5 years. Thyrotoxic symptoms were atypical in many patients. Acute paralysis usually occurred at night time. 2). 65.2% of patients had severe hypokalemia. On ECG: U wave presented in 76.1%, and flat/negative T wave is present in 56.5% of patients.

Key words: thyrotoxic periodic paralysis, hypokalemia
THYROID 2

A newly developed assay for thyroid stimulating antibodies (TSAb) are highly prevalent in Graves’ ophtalmopathy

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Graves’ ophtalmopathy commonly occurs in patients with Graves’ disease. Both TSH receptor antibodies (TRAb) and thyroid stimulating antibodies (TSAb) have been reported to be pathogenesis of GO. However, the correlation between GO and novel developed TSAb assay using EIA has not been reported. Of 303 consecutive and unselected patients with GD, 60 (19.8%) had overt GO. GO and Clinical active score (CAS) was diagnosed by ophtalmologist. Short inversion recovery (STIR), and sum of the maximum external orbital muscle areas (SEOMA) was determined by magnetic resonance imaging (MRI). However, there was no difference between GO and TSAb in all patient, TSAb was significantly elevated GO with smoking patient. Also, TSAb was elevated patient with GO did not smoke. In female, TSAb was elevated in patient with GO. There was no difference GO patient in male. TSAb was significantly higher in active GO. The multiple regression analysis shows relevant difference were noted between patient with active GO and no active state in TSAb level. The SEOMA values were significantly larger in the active GO group than the inactive GO group, The SEOMA were correlate with TSAb. In conclusion, TSAb is strongly associated with GO and active state of GO. These data show the prevalence of TSAb contribute to be pathophysiology of GO.
Clinical features and investigations of patients with primary hyperparathyroidism

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**Introduction:** Primary hyperparathyroidism is asymptomatic disease in the Western world. However, in Vietnam, this disease tends to be late-diagnosed with more severe symptoms and abnormal laboratory tests.  

**Objectives:** To investigate the clinical features and investigations in patients diagnosed with primary hyperparathyroidism.

**Materials and methods:** Observational prospective study in 38 patients with primary hyperparathyroidism mat Bach Mai Hospital, Hanoi, Vietnam from July 2016 to September 2017.

**Results:** The mean age of these patients was 55.5 years old, with 31.6% of those were between 40 and 50 of ages. The female/male ratio was 2.2/1; 78.9% of these patients were symptomatic. Most of these symptoms were nonspecific with fatigue found in 60.5%, osteoporosis found in 53.8% and nephrolithiasis seen in 69.4% of patients. Almost patients had overt elevated serum calcium and PTH. Vitamin D deficiency was seen in 44.4% of our patients. Hyperuricemia, elevated serum alkaline phosphatase (ALP), hypophosphatemia was also common, and we found that PTH had a significant positive correlation with serum calcium, ALP and parathyroid tumor size. Elevated ALP level in blood might relate to the hungry bone syndrome after parathyroid tumors removal. On histologic exam, 96.4% parathyroid tumors were benign; we only had one case with parathyroid cancer. Using ultrasonography help us to detect parathyroid tumors in 92.1% of cases, most of these tumors were seen on ultrasound with sonographic features such as hypoechoic, clear boundary mass with hyper-vascularity on Doppler scan. Moreover, the use of Tc-99m Sestamibi scan could help to detect in 75.9% of cases.

**Conclusion:** In our study, with many cases of late-diagnosed, primary hyperparathyroidism is symptomatic disease in Vietnam with more than half of those presented with bony and renal symptoms. Calcium, parathyroid hormone levels and ultrasound should be done first to diagnose and localize the tumors.
DIABETES MELLITUS 1
Evaluating insulin resistance in prediabetes patients

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Objective: To assess the characteristic of insulin resistance in prediabetes patients. Subjects: 197 participants, including 97 people in prediabetic group and 100 people in control group, recruited from the Outpatient department, Bach Mai hospital from 4/2014 to 12/2016.

Methods: Study design: Case-control. Prediabetic status was defined as a fasting blood glucose level from 5.6 to 6.9 mmol/l or blood glucose level after 2 hour-glucose tolerance test from 7.8 to 11 mmol/l. HOMAIR was used to assess the insulin resistance.

Results: Mean age of pre-diabetic group was 48.96 (± 9.98) years and age 50.11 (± 10.01) years in control group (p > 0.05). There were no difference between gender, height, weight, waist circumference, smoking status, diastolic blood pressure between the two groups... Participants were categorized according to their baseline prediabetes phenotype as impaired fasting glucose only (IFG) (20.6%), impaired glucose tolerance only (IGT) (41.2%), or combined IFG and IGT (IFG/IGT) (38.2%). In this study, HOMAIR at the third quartile in control group was 2.02, so insulin resistant status was defined as HOMAIR higher than 2.02. The insulin resistance was significantly higher (67.01% & 25%, p < 0.001) in pre-diabetic group than in control group. There was no difference in insulin resistance (80%; 67.5%; 59.5%, p > 0.05) between 3 pre-diabetic subgroups. There was no relationship between HOMAIR and gender, age, blood pressure, cholesterol total, LDL cholesterol. There was a relationship between HOMAIR and smoking status, BMI, triglyceride, fasting glucose level, glucose level 2 hours after glucose tolerance.

Conclusion: The insulin resistance prevalence in prediabetic patients was significantly higher, with diagnostic implementation.
Depressive symptoms and related factors in elderly diabetic patients at a national geriatric hospital

Block H.T.V. Vu, H.T. Nguyen, T.X. Nguyen, T.A. Le

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Background and aims: Depressive symptoms and diabetes are both increasing and worse in the elderly population. Diabetes complicates depressive symptoms which are conversely harmful to diabetic outcomes. The aim of the study was to evaluate the presence of depressive symptoms and the clinical variables associated with depressive symptoms in elderly diabetic patients. Materials and methods: A cross-sectional study was conducted among diabetic patients aged ≥60 years old admitted to a National Geriatric Hospital from October 2015 to October 2016. Depressive symptoms were assessed by using the Geriatric Depression Scale (GDS). We obtained information on socio-demographic, medical history, glycaemic control (fasting plasma glucose and HbA1c), daily activities (Activities of Daily Living - ADL and Instruments Activities of Daily Living - IADL scale) and fall risks (the Time Up and Go test). Chi-square (χ2) statistics and logistic regression were used to analyse the collected data. Results: 412 diabetic patients were recruited with ages ranging between 60 and 91 years (average age 71.9 ± 7.63 years). 327 (79.4%) patients were categorized according to having depressive symptoms and the group aged 70 - 80 years old had the highest rate of depressive symptoms (141 patients, 43.1%). The proportion of participants with mild, moderate and severe depression symptoms were 62.9%, 14.6% and 1.9%, respectively. The average age, rates of secondary completion or lower, history of hypertension, and using insulin were higher in the depressive symptom group than those in the non-depressive symptom group (p < 0.05). The presence of depressive symptoms in the group with duration of diabetes ≥ 5 years was double in comparison with the group with duration of diabetes < 5 years (OR 2.4, 95% CI 1.27-4.66, p<0.01). The level of HbA1c was significantly different between the depressive symptom group and the non-depressive symptom group (7.74 ± 1.57 % and 6.61±1.21 %, p < 0.05, respectively). Depressive symptoms increased risk of falls (OR: 2.93; 95% CI: 1.28-6.72, p = 0.01), uncontrolled fasting blood glucose (OR: 4.09, 95% CI: 2.1-7.9, p < 0.001) and impairment of IADL (OR: 7.12, 95% CI: 3.4-14.9, p < 0.001). Rate of decreased ADL in the depressive symptom group (56.6 %) were higher than that in the non-depressive symptom group (10.6%) (p< 0.05). Conclusion: The prevalence of depressive symptoms was high and the presence of depressive symptoms was associated with increased poor glycemic control, fall risk and impairments of ADL, IADL among elderly diabetic patients.
DIABETES MELLITUS 1
Investigation of glycemic control outcome and incident of hypoglycemia in type 2 diabetes mellitus patients with end-stage renal disease

Hoang Trung Vinh, Nguyen Thi Phi Nga

Vietnam Military Medical University

Objectives: To assess glycemic control and manifestation of hypoglycemia in type 2 diabetes mellitus (T2DM) patients with end stage renal disease (ESRD) with or without renal replacement treatment.

Subjects and methods: 204 T2DM patients with kidney complications were enrolled in the study, in which 108 patients with ESRD and 96 patients with lower stage (1-4) chronic kidney disease in the control group.

Results: ESRD patients had a lower mean of fasting blood glucose levels and equivalent HbA1C when compared with those in the control group. Percentage of patients with good and acceptable blood glucose and HbA1C control in the study group were both significantly higher than those in the control group (85.2% and 81.4% vs 70.9% and 68.7%). Without using diabetes medications, 46.3% of ESRD patients had good or acceptable blood glucose, while all patients in the control group had to use diabetes medications to achieve desired blood glucose level. There was 77.8% of patients in the study group having hypoglycemia, significantly higher than that in the control group (25.0%). ESRD patients using diabetes medications had a higher rate of hypoglycemia than those not using diabetes medications. ESRD patients have higher rate of hypoglycemia and is increased by the use of diabetic medication. Rates of hypoglycemia in patients not undergoing hemo-dialysis were higher than those in patients undergoing hemodialysis (95.8% vs 60.0% and 72.0% vs 66.6%).

Conclusions: T2DM patients with ESRD lower blood glucose level but the incidence of hypoglycemia was also more prevalence, which was associated with some specific mechanism of disease.

Key word: type 2 diabetes mellitus; chronic kidney disease; end stage renal disease; glycemic control; hypoglycemia
DIABETES MELLITUS 2
Effectiveness of SGLT-2 inhibitors in two obese patients with diabetes mellitus

Hiroyuki Onose1*, Shinya Ishii1, Kenmei Okada2, Tetsu Yamada1 and Emiko Yamada1

Kanaji thyroid hospital1
Hakujikai memorial hospital2

Background: The aging and obesity of diabetic patients in Japan are advancing. Recently SGLT-2 inhibitors play an important role in diabetic therapy in Japan. We experienced two obese patients who reduced their weight and improved glycemic control dramatically by SGLT-2 inhibitors.

Case 1: 56 years old male patient (Height 166cm BW 88kg BMI 31.9). He was suffered hemorrhage in thalamus at the age of 44. Diabetes was diagnosed at the age of 56. He had hypertension, dyslipidemia and liver dysfunction. He had no retinopathy and nephropathy. His attending neurologist consulted with us about poor glycemic control. Fasting plasma glucose (FPG) and HbA1c was 142mg/dl and 9.6% under taking 750mg/day of Metformin, 3mg/day of Glimepiride and 100mg/day of Sitagliptin. We started 2.5mg/day of Luseogliflozin and reduced the dose of Glimepiride to 1mg/day. Anti-GAD antibody was negative and HOMA-IR was 2.55. We can finally stop other antidiabetic medicine without Luseogliflozin. HbA1c, FPG and BW were deceased to 5.8%, 105mg/dl and 75kg respectively.

Case 2: 56 years old male patient (Height 175cm BW 128kg BMI 41.8). He was diagnosed as diabetes mellitus, dyslipidemia, fatty liver and hypertension at the age of 40. He started basal bolus insulin therapy at the age of 50. When he was 58, HbA1c and FPG were 8.7% and 121mg/dl respectively under multiple injection therapy (insulin Aspart 10U before breakfast and lunch, insulin Aspart 12U before supper, insulin Degludec 35U before sleep) with 1500mg of Metformin, 50mg of Sitagliptin and 300mg of Acarbose. We reduced insulin Degludec to 24U before sleep and changed 50mg of Sitagliptin to 50mg of Ipragliflozin. FPG levels measured by self-blood glucose monitoring equipment decreased from 131mg/dl to 119mg/dl immediately in spite of the reduction of basal insulin. After 4 months HbA1c and BW were deceased to 7.5%, 124.3kg respectively. Conclusions: SGLT-2 inhibitors are quite effective for obese diabetes patients with marked insulin resistance. It brings weight reduction and excellent glycemic control without vigorous exercise.
The 29th Annual Meeting of Asia-Pacific Endocrine Conference

DIABETES MELLITUS 2

Fibrocalculous pancreatic diabetes mellitus

Tran Huu Dang*, Le Van Chi*, Vo Minh Phuong**, Nguyen Thi Bach Oanh***

*Hue University of Medicine and Pharmacy
**Can Tho University of Medicine and Pharmacy
*** Hue Central Hospital

Introduction and Aim: Fibrocalculous pancreatic diabetes mellitus (FPDM) is a type of diabetes that occurs in fibrotic pancreatitis, also known as tropical pancreatitis, is a chronic pancreatitis that occurs in developing countries. Compared with pancreatitis in temperate regions, fibrocalculous pancreatitis is found on younger subjects, which are more likely to lead to diabetes, pancreatic stones and more exocrine pancreatic disorders, there are also specific complications of diabetes that occur on FPDM patients. Patients with FPDM are also at risk for pancreatic cancer. Although FPDM pathogenicity is still unclear, micronutrient deficiencies, genetic, environmental toxicity (cyanogenic glycoside) are potentials risk factors that need further study. We conducted this study to characterize the clinical manifestation of FPDM in Hue, Vietnam.

Methods: Study design: Cross-sectional. The study recruited 48 FPDM case at Hue Central Hospital. Socio-demographic and clinical characteristic were collected. The diagnosis criteria was pancreatic stones on ultrasound and abdominal XQ and in accordance with Mohan's proposed diagnostic criteria for FPDM (WHO). The study followed the ethical consideration and informed consent were obtained from the patients.

Result: Most patients had early onset of disease <40 years: 64.6%). Only 66.6% of patients presented clear clinical manifestations, 33.4% having unspecific clinical manifestations. Most patients were underweight (64.6%), and no patients having high BMI. The prevalence of Epigastralgia was 95.8% and Steatorrhea was 53.8%. There were no cases of ketosis even when insulin treatment was stopped. Average blood insulin level was: 4.24 ± 4.86 μUI/mL.

Conclusion: We successfully characterized 48 cases of FPDM. The main clinical manifestations were epigastralgia and steatorrhea. Most patients have low BMI.
VANS-3S method as a low-cost video-assisted thyroid surgery for various thyroid diseases

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Since April 2016, Japanese public health care started to cover video-assisted thyroid surgery. However, it is still not so popular until now. One of the reasons must be high operation cost. Then we have been developing low-cost video-assisted thyroid surgery procedure called VANS-3S. We introduced Mist-less retractor we innovated, U-retractor/Iron-assistant and Nitrogen gas powered locking arm for endoscope, and that enable only single surgeon to complete video-assisted thyroidectomy successfully. Then we could cut personnel expense for three assistants. Moreover, instead of expensive disposable energy device, we introduced reusable energy device: BicCamp110. BicCamp110 is a radiofrequency device originally designed for MIVAT method and we proved it is also suitable for VANS method because of their fine jaw, speedy sealing and cutting tissues and durability. Then we held down power device cost to a one-thirteenth. Here I present videos of procedure of VANS-3S method with BiClamp110 for patients with various thyroid diseases. If our action contributes to the spread of video-assisted thyroid surgery to the world, I am happy enough.
The launch of endoscopic thyroidectomy

Takahisa Hiramitsu, Manabu Okada, Toshihiro Ichimori, Yoshihiro Tominaga

Department of Transplant and Endocrine Surgery, Nagoya Daini Red Cross Hospital

Since last year, the medical fee of endoscopic thyroidectomy has been covered by national insurance in Japan. For the launch of endoscopic thyroidectomy, we had a lot of requirements including instruments, staff education, observation of this procedure, training using pig, and instruction by specialist. Before deciding the launch of endoscopic thyroidectomy, we visited the animal experimentation laboratory to try this procedure and realized the applicability to our procedure. After discussing with executives in our hospital, we chose the VANS procedure developed by Prof Shimizu. First, we visited Kanaji Hospital to observe this procedure and prepared instruments available in our hospital. With the videos and pictures, we educated the staff. After these preparations, we successfully performed the first case of VANS method under instruction of Prof Shimizu. The patient was 57 years old and referred to our hospital for the thyroid tumor (25.3*16.1*12.5mm) in the left lobe. Fine needle aspiration cytology showed no malignancy. The operative duration was 2 hours and 41 mins. He left hospital 5 days after operation without any complications. With this experience, we realized the necessity of dedicated retractor. We will present our first experience using pictures and videos.
### THYROID 3

**Video-assisted thyroidectomy (vans method) for early-stage carcinoma**

*Kenichiro Nomura¹, Akihiro Katayama², Miki Takahara¹, Akihiro Katada¹, Tatsuya Hayashi¹, Yasuaki Harabuchi¹*

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**Background:** Video-assisted neck surgery (VANS method) was first introduced by Shimizu in 1998. The advantages of this method are the wide access and the possibility of manual palpation of the tumor and the trachea, and the cosmetic viewpoint. No further equipment regarding the CO2 insufflation is needed and there is no risk for related complications. We have introduced VANS method since May 2009, and modified surgical techniques and its indications. Our criteria of VANS at this moment is for benign thyroid nodules, Graves' disease, and cT1 (less than 2 cm) N0M0 differentiated thyroid cancer (DTC). The purpose of this study was to evaluate the feasibility of VANS for cT1N0M0 DTC.

**Methods:** The main incision 2.5 cm was made on the diseased side of the chest wall below the clavicle, and skin flap retractor was inserted under the subplatysmal layer for creating working space. An endoscope was inserted via the 5 mm ports on diseased sides of the neck. We performed the lobectomy with prophylactic central neck dissection.

**Results:** We had performed VANS on total 280 patients between 2009 and 2017. Of these patients, 34 (29 female, 9 male) patients had DTC. Median age was 40 years old and median size of the tumor was 13.5 mm. Median operative time was 136 minutes and a median duration of postoperative hospitalization was 2 days. As a complication, 4 patients (11%) had a transient vocal cord paralysis. No patients needed conversion to the open surgery and the tracheostomy.

**Conclusions:** VANS method was a feasible and safe procedure for the patients with early-stage DTC.
PITUITARY

A case of lymphocytic adenohypophysitis triggered by Postpartum vision impairment

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Case presentation: 31-year-old, 3-gravidities and 3-parous female, who had severe headache and bitemporal hemianopsia, visited to our hospital. She never had headache and decreased visual acuity the day after the third childbirth. In addition, there was a fever of 39 degrees for two days 20 days after childbirth. After that these symptoms improved once naturally. Lactation was never seen, and there was no resumption of menstruation after third childbirth. A headache appeared again two months postpartum, and she noticed that side mirrors of the car were hard to see. Her eyesight has also declined. When she visited the ophthalmologist at the fourth month postpartum, bitemporal hemianopsia was pointed out. In biochemical examination, levels of LH and FSH were <0.1 mIU/ml and FSH 2.7 mIU/ml. Levels of TSH and FT4 were 0.14 μIU/ml and 0.6 ng/ml, which showed central hypothyroidism. Adrenal insufficiency (ACTH: 2.3 pg/ml, Cortisol: 0.2 μg/dl) and adult GH deficiency (GH 1.2 ng/ml, IGF-1 190 ng/ml) were also observed. As a result of various pituitary anterior hormone tolerance tests, it was diagnosed as severe AGHD, ACTH and, LH, and FSH deficiency. There was no anti-pituitary antibody. MRI showed pituitary stem expansion and bilateral symmetrical pituitary enlargement of 15 mm in size with a uniform contrast effect. From these results, lymphocytic adenohypophysitis was most suspected. When treatment was started with PSL 30 mg, the pituitary gland quickly shrunk in 1 month after treatment and simultaneously the bitemporal hemianopsia improved. Discussion: Lymphocytic adenohypophysitis is common in perinatal women. The onset during pregnancy is diagnosed at a relatively early stage because they are attending the hospital, however onset after childbirth is hard to notice. This case is suspected onset immediately after childbirth, however 4 months have passed until the diagnosis. For early diagnosis and treatment, it is necessary to enlighten gynecologists and pregnant women. We report the case which is a valuable and suggestive case.
PITUITARY

Organization of a training model and system for skull base closure with suturing in endonasal surgery

Yudo Ishii1*, Hiroyoshi Akatsu2, Ryosuke Mori1, Daichi Kawamura1, Yasuharu Akasaki1, Yuichi Murayama1

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Recently, the development of techniques in the endoscopic endonasal surgery is remarkable. Because this procedure is less invasive and reasonable for tumor removal, many skull base lesions have come to be managed by this procedure. It depends on the progress of the endoscope technology, as well as the spread of training system for surgical technique. The most important thing for good surgery is to understand the surgical anatomy and approach. There are many training seminars focused on learning it, and many institutes have introduced this surgery. The next is to secure safe and certain surgery by overcoming complications. A cerebrospinal fluid leakage (CSFL) is more likely to occur in endonasal skull base surgery than in open surgery. One of a reliable method for preventing CSFL is a vascularized mucosal flap. Using a nasal septal mucosa, dural defect is closed by covering with vascularized flap. Though this method dramatically decreased the CSFL, occurrence rate of it become to 5%, we would have to prevent it completely. We have reported a new technique for closing dura, named “Fascia Patchwork Closure”, using a fascia lata, dural defect was closed with suturing. There were no CSFL in our 60 cases using this technique. But suturing in deep and narrow operative field is quite difficult. Moreover, it is very complicated to make suturing in endoscopic 2-D view.

To generalize the useful suturing technique for closing skull base, we made a new model for training the suturing technique in endoscopic endonasal surgery. This model is special for closing the sellar dura. It consists of narrow cylinder with artificial dura, mannequin face, endoscope for industrial use and small monitor. Because of its portability, we can use for training independent of time and place. The endoscope camera is full HD, we can train our techniques in just like a real surgery. Because it has a port of endoscope in addition to both nostrils for beginner surgeon, suturing manipulations are not obstructed by endoscope. The training program has lectures and a workshop, lectures are for understanding surgical anatomy and theory of skull base closure, and workshop is carried using the model guided by supervisors. Participants introduce this technique after they master it in this training program, and feed-back its results to us. Supervisors help actual surgery as needed. This training program will generalize the suturing technique, and will contribute to further development of endoscopic endonasal skull base surgery.
ADRENAL

Glucocorticoid-induced adrenal insufficiency in Vietnam

Tran Quang Nam MD,

University of Medicine and Pharmacy at Ho Chi Minh city

Glucocorticoid-induced adrenal insufficiency (GCAI) is common side effect of glucocorticoid usage. Its prevalence ranges from 10% to 70%. GCAI is caused by suppression of Hypothalamic-Pituitary-Adrenal (HPA) axis function due to negative feedback of glucocorticoid usage. Its presentations could vary from subtle forms with no cushingoid features to overt forms of exogenous Cushing. The key to diagnosis of GCAI is to carefully take history of exposure to exogenous glucocorticoids. Confirming GCAI requires following tests: low morning plasma cortisol or no responsiveness to stimulatory tests of HPA axis. Patients with suspicion should only be tested when they are on physiological dose of glucocorticoid (less than 5 mg to 7.5 mg a day of prednisone or 15 mg to 20 mg a day of hydrocortisone, or the equivalent) or they stop glucocorticoid. An initial step to evaluate HPA axis reactivation is to measure morning cortisol. 8 AM plasma cortisol less than 3 μg/dL (83 nmol/L) is consistent with suppression of basal cortisol secretion from HPA axis. If morning cortisol is more than 20 mcg/dL (550 nmol/L), HPA axis function is recovered. If values are between 3 to 20 mcg/dL, stimulatory tests of HPA axis are required. Short 250 μg ACTH stimulation test is most commonly performed. Peak plasma cortisol >20 μg/dL (550 nmol/L) after this test shows that adrenal gland function is normal and glucocorticoid may be withdrawal. The insulin tolerance test and the metyrapone test can accurately assess the entire HPA axis, however they are not frequently used because of cumbersomeness.
ADRENAL

Lymph node metastasis of adrenocortical cancer treated with chemotherapy followed by lymph node dissection

Akiyoshi Katagiri

Department of Urology, Niigata Prefectural Central Hospital

Adrenocortical cancer (ACC) is a rare malignancy with poor prognosis. In the treatment of advanced ACC, chemotherapy of mitotane and or etoposide/doxorubicin/cisplatin (EDP) is considered to be standard. We present a case of ACC with lymph node involvement pathologically diagnosed at adrenalectomy, in which complete remission was achieved with lymph node dissection after chemotherapy of EDP and mitotane.

Case report: A 56-year-old woman was referred to our hospital for left adrenal tumor detected in examination of persistent cough. Computed tomography (CT) showed a 5-cm tumor of the left adrenal and a small lymph node at the left renal hilus. In hormonal examination, aldosteronism and pheochromocytoma was denied. Although serum DHEA-S was increased, cortisol level in urine was normal and serum ACTH and cortisol was suppressed in 1mg dexamethasone suppression test. She was treated with laparoscopic adrenalectomy without lymph node dissection. Pathological examination revealed ACC with lymph node metastasis in adjacent tissues. On postoperative CT, the left renal hilar node was increased. Then chemotherapy with EDP and mitotane was started as presurgical setting. After two course of EDP, The Lymph node was decreased in size, and lymph node dissection was performed. A single lymph node with viable metastasis was detected in pathological examination. No adjuvant treatment was performed. She is alive without recurrence 12 month after the second surgery.

It is reported that most of ACC shows steroid hormone excess or abdominal mass effects, whereas some patients is initially diagnosed incidentally. As treatment of ACC, surgical resection is the standard and EDP with mitotane is the only recommended regimen in inoperable advanced cases. In this case, combination therapy of EDP with mitotane and surgery was effective.
ADRENAL

A case with central hypoadrenalism who showed an anaphylactic reaction to intravenously administered hydrocortisone succinate

Tetsuro Tamura, Shinya Yamashita, Naoto Tsuchiya, Takuma Nemoto

Department of Neurosurgery, Niigata Prefectural Central Hospital

A few studies reported that even glucocorticosteroids with anti-allergic actions induced anaphylactic reactions. Case reports on anaphylactic reactions to intravenous injection in the absence of oral glucocorticoid-related abnormalities have been published, although such cases are rare. We report a patient with hypoadrenocorticism.

A 58-year-old man consulted the department of Internal Medicine with anorexia, which had persisted for 2 months. As marked hyponatremia (104mEq/L was observed, he was admitted. Hypothyroidism and hypogonadism were noted. Despite correction with hypertonic saline, stabilization was not achieved, leading to delirium. The oral administration of dexamethasone improved the serum Na level, and this level was maintained by orally administering hydrocortisone, facilitation rehabilitation. MRI of the pituitary gland revealed a cystic lesion. The lesion had increased after 9 months. He was admitted to our department to undergo surgery. Directly before surgery, 100mg of Solu-Cortef\textsuperscript{R} was intravenously injected. Immediately, systemic flushing/edema and swollen exanthema appeared, leading to vomiting and a decrease in the percutaneous oxygen saturation. The subcutaneous injection of adrenaline and oxygen inhalation were performed, resulting in recovery after 30 minutes. Later, a prick test showed positive reactions to Solu-Cortef\textsuperscript{R} and Solu-Medrol\textsuperscript{R}, but there were negative reactions to Hydrocortone\textsuperscript{R} and Rinderon\textsuperscript{R} on prick, intracutaneous, and challenge tests. Rinderon\textsuperscript{R} was used in the periopertative phase, and surgery could be completed. After surgery, there was no pituitary function recovery.

Conclusion: Esterified glucocorticosteroids may induce anaphylactic reactions. Considering this, emergencies involving patients with hypoadrenocorticism should be carefully managed. It is necessary to search for safe steroids.
A case with central hypoadrenalism who showed an anaphylactic reaction to intravenously administered hydrocortisone succinate

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仕様

<table>
<thead>
<tr>
<th>型式</th>
<th>製品コード</th>
<th>適合径</th>
<th>皮切</th>
<th>包装形式</th>
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| FF0706S | 29150300 | φ70Xφ60 mm | 3.5cm | 1箱2個入、1セット毎ビールオープン包装、EPO遮断済
| FF0606S | 29150310 | φ60Xφ50 mm | 2.5cm |
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糖尿病治療全般に関する情報提供を、
積極的に行ってきました。
今後もさらに、多角的なアプローチで、
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糖尿病領域における
真のパートナーを目指して——
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まだなくすりを
創るしごと。

世界には、まだ治せない病気があります。

世界には、まだ治せない病気とたたくろう人々がいます。

明日を変える一鍵を創る。

アステラスの、しごとです。

明日は変えられる。

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