

# 総目次

## 第97回 日本内分泌学会学術総会

代表理事あいさつ	1
会長あいさつ	2
プログラム委員長あいさつ	3
プログラム委員	4
各賞選考委員・一般演題選定委員	4
日本内分泌学会学会賞・日本内分泌学会学術賞・日本内分泌学会 Distinguished Endocrinologist Award	5
日本内分泌学会研究奨励賞受賞者・EJ優秀論文賞受賞者・研究助成制度受給者	8
ご案内・交通案内・会場案内	12
学術総会日程表	24
指定講演による単位取得について	30
日本糖尿病療養指導士 (CDEJ) について	32
YIA 審査講演日程・座長一覧	33
一般演題 (口演) 日程・座長一覧	34
一般演題 (ショートオーラル) 日程・座長一覧	36
一般演題 (ポスター) 日程・座長一覧	37
学術総会プログラム	39
抄録	149
特別講演	151
会長講演	155
特別企画	156
Meet the Professor	157
The KES-JES Joint Symposium	163
日本内分泌学会100周年特別企画	167
特別シンポジウム	168
シンポジウム	174
JES We Can	202
クリニカルアワー	206
教育講演	234
中堅若手の会企画 YEC セミナー	262
若手臨床内分泌医育成委員会 企画	271
CPC/症例検討	275
学会賞受賞講演	283
学術賞受賞講演	284
Distinguished Endocrinologist Award 受賞講演	285
研究奨励賞受賞講演	286
研究助成受賞講演	290
若手研究奨励賞 (YIA) 審査講演	294
The KES Session	298
Late Breaking Session from Endocrine Journal	299
Late Breaking Session in Yokohama	301
一般演題 (口演)	303
一般演題 (ショートオーラル)	359
一般演題 (ポスター)	367
人名索引	437
キーワード索引	467

- 01-5-18 Efficacy and Safety of TransCon PTH in Japanese Adults with Hypoparathyroidism: 52-Week Results from the Phase 3 PaTHway Japan Trial

Division of Endocrinology and Metabolism, Department of Internal Medicine, Kurume University Hospital, Fukuoka, Japan Kenji Ashida 他

□演7: English Session 4 Diabetes・Adrenal&Steroids 6月6日(木) 15:30-16:30 第5会場

座長: 菅原 明(東北大学大学院医学系研究科 分子内分泌学分野)  
篁 俊成(金沢大学大学院医学系研究科 内分泌・代謝内科学)

- 01-5-19 思春期1型糖尿病は、前思春期1型糖尿病よりもインスリンポンプ、SAPの使用率が低い。

小児インスリン治療研究会/埼玉医科大学小児科 菊池 透 他

- 01-5-20 Relationship between Age and Glucose Levels in Productive Post Office Workers: A Cross-Sectional Study

Faculty of Medicine, Universitas Islam Indonesia Muhammad Luthfi Adnan et al.

- 01-5-21 The risk of new-onset dementia in patients with type 1 and type 2 diabetes: A nationwide population-based cohort study

Kyung Hee University Hospital at Gangdong Ji Eun Jun et al.

- 01-5-22 転写因子ChREBPの新規活性阻害剤の糖尿病性腎臓病に対する作用機序解析

東北大学大学院医学系研究科 分子内分泌学分野 Thanh-Phuong Nguyen 他

- 01-5-23 Cytosolic IRF-3/HSD11B2 modulates glucocorticoid sensitivity during influenza infection

北海道大学遺伝子病制御研究所 齋 秀二 他

- 01-5-24 ステロイド合成酵素阻害薬の特性と違いに関する機能性副腎腫瘍組織を用いたin vitroでの作用比較検討

千葉大学大学院医学研究院分子病態解析学 瀧 由樹 他

□演8: English Session 5 Thyroid・Pituitary・Pheo/PPGL

6月6日(木) 16:35-17:45 第5会場

座長: 鯉淵 典之(群馬大学大学院医学系研究科 応用生理学分野)  
竹越 一博(筑波大学 医学医療系 臨床医学域 スポーツ医学・臨床検査医学)

- 01-5-25 Acute suppurative thyroiditis with thyrotoxicosis caused by disseminated methicillin-resistant Staphylococcus aureus infection in a patient with type 1 diabetes

Ajou University School of Medicine Seung Jin Han et al.

- 01-5-26 Dose-dependent incidence of agranulocytosis in patients treated with methimazole and propylthiouracil

伊藤病院 鈴木 菜美 他

- 01-5-27 The role of silencing mediator of retinoid and thyroid hormone receptors (SMRT) in modulating the electrophysiology of cerebellar Purkinje cells

群馬大学大学院医学系研究科 応用生理学分野 二ノ宮彩音 他

- 01-5-28 Tamoxifen and residual tumor volume in postoperative nonfunctioning pituitary neuroendocrine tumors: A pilot study

Department of Internal Medicine, Kulliyah of Medicine, International Islamic University Malaysia / Medical Department, Faculty of Medicine, National University of Malaysia Amalina Haydar Ali Tajuddin et al.

### 01-5-25 Acute suppurative thyroiditis with thyrotoxicosis caused by disseminated methicillin-resistant *Staphylococcus aureus* infection in a patient with type 1 diabetes

Seung Jin Han, Nami Lee  
Ajou University School of Medicine

Acute suppurative thyroiditis (AST) is rare but potentially fatal. Here, we report a case of AST caused by methicillin-resistant *Staphylococcus aureus* (MRSA) in patient with T1DM, which is initially difficult to differentiate from subacute thyroiditis (SAT).

A 32-year-old woman with T1DM reported right-sided neck swelling, dysphagia, and thigh pain. The patient was diagnosed with SAT and prescribed prednisolone and ibuprofen. Four days later, she presented to the emergency room with presyncope and worsening symptoms. She had tachycardia, mild right thyroid tenderness, elevated inflammatory parameters, and thyrotoxicosis without TSH receptor antibodies. Empirical antibiotic (ceftriaxone) and prednisolone treatment was started. CT scan revealed hypodense masses with peripheral enhancement consistent with abscesses in the right thyroid gland, right axilla, chest wall, right kidney, both thighs, and pulmonary septic embolism with pleural effusion. The patient had pericarditis with pericardial effusion on echocardiography. For diagnostic and therapeutic purposes, US-guided aspiration of the thyroid abscess and percutaneous drainage of the pericardial effusion were performed. MRSA was isolated from thyroid pus, pericardial effusion, urine, and blood. Ceftriaxone was changed to vancomycin.

This case is AST with disseminated MRSA infection. Prompt diagnosis and treatment of AST is strongly required, especially in patient refractory to steroid treatment for SAT.

### 01-5-27 The role of silencing mediator of retinoid and thyroid hormone receptors (SMRT) in modulating the electrophysiology of cerebellar Purkinje cells

二ノ宮 彩音<sup>1</sup>、天野 出月<sup>1</sup>、小尾 紀翔<sup>1</sup>、Megan Ritter<sup>2</sup>、Anthony Hollenberg<sup>2</sup>、鯉淵 典之<sup>1</sup>

<sup>1</sup>群馬大学大学院医学系研究科 応用生理学分野、<sup>2</sup>ボストン大学医学部

抑制型転写共役因子であるsilencing mediator of retinoid and thyroid hormone receptors (SMRT or NCoR2)は甲状腺ホルモン受容体をはじめとする核内受容体の作用において重要な役割を果たしていることが知られている。近年、抑制型転写共役因子のde novo変異により神経発達障害の表現型を示すことが報告され、中枢神経系における役割が注目されている。本研究では、神経発達障害の関連領域の一つとされる小脳に着目し、SMRTの生理学的機能を明らかにすることとした。小脳プルキンエ細胞特異的にSMRTを欠失させたモデルマウスをL7/pep2 CreマウスとSMRT-floxマウスを掛け合わせることで作り出した。身体的発育・発達には異常を認めなかったが、生後8週齢にて軽度な協調運動失調ならびに運動学習異常を認めた。続いて、社会性行動における影響を解析するため、三部屋式社会性試験を行ったところ、社会性行動に異常が認められた。これらの行動変容の細胞基盤を解析するため、パッチクランプ法を用い、SMRTを欠損したプルキンエ細胞の電気生理学的特性を記録した。その結果、SMRTを欠失したプルキンエ細胞では、自発発火頻度と電流注入時における膜の興奮性が有意に増加していた。さらに、プルキンエ細胞の樹状突起におけるスパインの有意な増加を認めた。これらの結果より、SMRT欠失がプルキンエ細胞の過活動を引き起こし、小脳機能に異常をもたらしていることが示唆された。本研究はSMRTが小脳プルキンエ細胞の電気生理学的特性調節に重要な役割を担っていることを明らかにした。

### 01-5-29 負荷試験を含むCDの臨床的特徴はCDの下垂体腫瘍SSTR5発現と関連する

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【背景】ソマトスタチン受容体 (SSTR) 5に対するリガンドであるパシレオチドはクッシング病 (CD) の約30%でしか有効ではない。従って、パシレオチド有効性を考慮した個別化医療が求められている。我々はこれまでに先端巨大症の負荷試験が治療薬であるSSTR2リガンドと同様にCDにおいても負荷試験がSSTR5リガンド有効性を予測する可能性がある。【目的】負荷試験を含むCDの臨床的特徴からCDの下垂体腫瘍SSTR5発現を予測する。【方法】CD患者27例。下垂体腫瘍のSSTR5発現とCDの負荷試験であるCRH・デスマプレシン (DDAVP) 負荷に対するACTH増加率、高用量デキサメタゾン負荷 (HDDST) に対するコルチゾール (F) 抑制率の関係を検討。さらに、グルココルチコイドに対するnegative feedbackの指標としてACTH/F比、下垂体腫瘍径、下垂体腫瘍単位体積あたりのACTH分泌能の指標として尿中遊離F (UFC)/腫瘍体積比の関係を検討。【結果】いずれのパラメータもSSTR5と有意に相関した (CRH:  $r=0.56$ , DDAVP:  $r=0.76$ , HDDST:  $r=0.77$ , ACTH/F比:  $r=-0.67$ , 腫瘍径:  $r=0.61$ , UFC/腫瘍体積:  $r=0.42$ )。SSTR5高発現を予測するROC解析におけるAUCはCRH 0.79, DDAVP 0.92, HDDST 0.78, ACTH/F比 0.80、腫瘍径 0.71、UFC/腫瘍体積 0.65であった。【結論】いずれのパラメータもSSTR5発現と関連し、CDにおけるパシレオチド (SSTR5リガンド) の個別化医療に貢献する可能性がある。また、これらの関連は下垂体腫瘍の生物学的特徴を示す可能性がある。

### 01-5-26 Dose-dependent incidence of agranulocytosis in patients treated with methimazole and propylthiouracil

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伊藤病院

Background: Agranulocytosis (AGC) is a serious adverse event of methimazole (MMI) and propylthiouracil (PTU). There have been reports suggesting a dose-dependent incidence, although it is inconsistent. Objective: To clarify whether the incidence of AGC induced by MMI and PTU demonstrates dose-dependency. Methods: This is a retrospective observational study including 22,993 patients with newly diagnosed Graves' disease between January 2005 and December 2022, who could continue antithyroid medication (18,259 treated with MMI and 4,734 treated with PTU) for more than 90 days. Results: The incidence rates of AGC for MMI showed a significant dose-dependent increase ( $p=0.006$ ). Similarly, the incident rates for PTU showed a significant dose-dependent increase ( $p=0.0031$ ). However, there were no case of AGC in patients receiving 125 mg/day or less of PTU. The prevalence of AGC at the same potency of hormone synthesis inhibition (MMI 15 mg vs. PTU 300 mg) was significantly higher with PTU (0.20% vs. 0.81%,  $p<0.0001$ ). Conclusion: The study confirmed a dose-dependent increase in the risk of AGC for both drugs. However, PTU presented a considerably higher tendency to induce AGC than MMI when both drugs were compared at the same potency of anti-thyroid efficacy.

### 01-5-28 Tamoxifen and residual tumor volume in postoperative nonfunctioning pituitary neuroendocrine tumors: A pilot study

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Selective anti-estrogen receptor modulators (SERMs) have been shown to reduce the size of pituitary tumors. However, their clinical effect on nonfunctioning pituitary neuroendocrine tumors (NF-PitNET) in humans has not yet been established. We conducted a randomized controlled trial of tamoxifen versus conservative treatment in postoperative patients with residual tumors positive for estrogen receptor immunostaining to investigate the potential clinical impact on tumor volume. In this pilot study of 16 NF-PitNET patients, eight patients were randomized to receive 20-40 mg of tamoxifen daily for six months, while the other eight patients were treated conservatively. Serial MRI scans of the pituitary gland were performed at the beginning and end of the six months. Tamoxifen led to a significant reduction (> 25%) in tumor volume in three patients, while the tumor stabilized in the remaining five patients ( $p=0.046$ ). In the control group, significant tumor growth was observed in three patients, while no significant change in tumor volume was observed in the remaining five patients. In general, tamoxifen was well tolerated. This pilot study illustrates the potential role of tamoxifen in postoperative residual NF-PitNET. This response to tamoxifen therapy needs to be further investigated in a longer-term study with a larger number of patients.

### 01-5-30 Preoperative Amlodipine Is Efficacious in Preventing Intraoperative HDI in Pheochromocytoma: Pilot RCT

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Context: Preoperative blockade with  $\alpha$ -blockers is recommended in patients with pheochromocytoma/paraganglioma (PPGL). The data on calcium channel blockade (CCB) in PPGL are scarce.

Objective: We aimed to compare the efficacy of CCB and  $\alpha$ -blockers on intraoperative hemodynamic instability (HDI) in PPGL.

Methods: In the interim analysis of this monocentric, pilot, open-label, randomized controlled trial, patients with solitary, secretory, and nonmetastatic PPGL were randomized to oral prazosin gastrointestinal therapeutic system (GITS) (maximum 30 mg,  $n=9$ ) or amlodipine (maximum 20 mg,  $n=11$ ). The primary outcomes were the episodes and duration of hypertension (systolic blood pressure  $\geq 160$  mmHg) and hypotension (mean arterial pressure < 60 mmHg) and duration of HDI (hypertension and/or hypotension) as a percentage of total surgical time (from induction of anesthesia to skin closure). Results: The median (IQR) episodes (2 [1-3] vs 0 [0-1];  $P=0.002$ ) and duration of hypertension (19 [14-42] vs 0 [0-3] minutes;  $P=0.001$ ) and intraoperative HDI duration (22.85  $\pm$  18.4% vs 2.44  $\pm$  2.4%; CI, 8.68-32.14%;  $P=0.002$ ) were significantly higher in the prazosin GITS arm than the amlodipine arm, whereas episodes and duration of hypotension did not differ between the 2 groups. There was no perioperative mortality. One patient had intraoperative ST depression on the electrocardiogram.

Conclusion: Preoperative blockade with amlodipine is an efficacious alternative to prazosin GITS in preventing intraoperative HDI in PPGL.