第37回日本脳神経外科国際学会フォーラム

The 37th Japan Neurosurgical English Forum (JNEF)

2023年7月28日(金)~29日(土)

会場 パシフィコ横浜 会議センター5F「503」

会長 近　貴志 昭和大学医学部脳神経外科学講座

事　務　局　昭和大学医学部脳神経外科学講座　〒142-8555 東京都品川区旗の台1-5-8　TEL:03-3784-8000(代表)
連絡事務局　株式会社コンベックス　〒106-0041 東京都港区麻布台1-11-9 BPRプレイス神谷町
TEL:03-3505-1608　FAX:03-3505-3366　Email:jnef2023@convex.co.jp

http://jnef2023.umin.jp/

第37回 日本脳神経外科国際学会フォーラム

The 37th Japan Neurosurgery English Forum

JNEF2023

プログラム・抄録集

2023年7月28日（金）・29日（土）

パシフィコ横浜会議センター

当番世話人・会長：近　貴志
（昭和大学医学部 脳神経外科学講座）

ご挨拶

第37回日本脳神経外科国際学会フォーラム（Japan Neurosurgery English Forum, JNEF）および第36回日本脳神経外科同時通訳夏季研修会（Simultaneous Interpreters Group in Neurosurgery, SIGNS）を2023年７月28・29日にパシフィコ横浜　会議センターにて開催いたします。

JNEF の前身 SNEF（Shonan Neurosurgery English Forum）は1993年に細田浩道会長により第１回が開催され、以後第10回まで湘南および横浜で開催されておりました。

その後各地で開催されるようになりましたが、横浜での開催は2013年の坂田勝巳会長以来10年ぶりとなります。

この３年、COVID-19の影響で in-person での meeting や国際交流が大きく制限され、本会も2020年は開催できず、2021年は谷口理章会長により web で開催されました。この間オンラインでの webinar が発展し、また AI の通訳　翻訳ソフトの開発も進んできました。しかし、これらにより人間による通訳は不要となり、外国語を学ばずに全てつとまるものでしょうか？通訳　翻訳ツールが手軽になった現在では、日常診療の補助に用いる機会もありますが、当方のニュアンスを全て訳せるとは限らず、知らぬ間に異なるニュアンスで伝わってしまうリスクはまだあります。また専門的な内容の翻訳はまだ不十分で、「自身が理解していなければ訳しても通じない」ことを日常診療で実感しております。

昭和大学および関連病院の多くは東京都城南地区、川崎市、横浜市を診療拠点としており、東京国際空港（羽田空港）に至近であることより、日本語を話せない外国人の患者さんの来院が多いため、英語での診察のみならず検査、治療に対しての説明、本国の家族への病状説明、帰国時の情報提供書作成など、英語を用いる機会が多くなってきております。

本会では、本年４月より昭和大学脳機能解析・デジタル医学研究所の所長（昭和大学脳神経外科兼任）になられた佐藤洋輔先生にもご協力いただき、海外からの演者・参加者をお招きしてご講演いただく予定です。

学会のポスターは幾多の困難を乗り越え、横浜港から氷川丸で米国へ留学され、その後の我が国の脳神経外科と医学英語の発展に多大な貢献をされた植村研一先生、また横浜の地で SNEF を発展させ、我々を導いてくださった諸先生方への敬意と、英語とは無縁であった地方の中学生であった約40年前、英語を勉強して外国へ行くことを夢見て自ら英語学習を始め、今もその夢の途上にある自分自身の気持ちを表現しております。

外国語学習のツールも増えて、COVID-19 による入国制限は解除され、ポストコロナの時代となり、国際交流も再び活発になってくると思われます。また、‘Travelling without moving’ の形で、web を介した国際会議も容易にできる時代となりました。そのような時代であるからこそ、特に若手の先生方には英語を学んで国際学会への参加、英文論文作成、海外施設見学や留学などに積極的に挑戦していただきたいと期待しております。本会がそのためのお手伝いをできる機会となれば幸いです。

皆様のご参加をお待ちしております。横浜でお会いできますのを楽しみにしております。

2023年７月

第37回日本脳神経外科国際学会フォーラム（JNEF）
第36回日本脳神経外科同時通訳夏季研修会（SIGNS）

当番世話人・会長 近　　貴志
昭和大学医学部　脳神経外科学講座

日本脳神経外科国際学会フォーラム

名誉会員

阿部　俊昭　池﨑　清信　伊藤　昌徳　植村　研一　亀山　元信
小林　茂昭　佐伯　直勝　佐藤　　修　茂野　　卓　竹井　　太
中川　　洋　西澤　　茂　藤井　清孝　細田　浩道　本郷　一博
松村　　明　水野　順一

運営委員

赤井　卓也　遠藤　俊毅　大宅　宗一　荻野　雅宏　近　　貴志
近藤　　威　坂田　勝巳　柴田　　靖　下地　一彰　平　　孝臣
太組　一朗　伊達　　勲　谷口　理章　徳川　城治　名取　良弘
西岡　　宏　原　　淑恵　樋口　佳則　藤巻　高光　松山　純子
三原　千恵　村垣　善浩　安田　宗義

敬称略　氏名50音順

次期開催のご案内

第38回日本脳神経外科国際学会フォーラム
第37回日本脳神経外科同時通訳夏季研修会

会長：樋口　佳則
（千葉大学大学院医学研究院脳神経外科学）

会期：2024年7月19日（金）・20日（土）
会場：一橋講堂

本学会に関するお問い合わせ

【事務局】
昭和大学医学部 脳神経外科学講座内
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SNEF/ JNEF のあゆみ

	President	Place	Date
第 1 回	細田　浩道	大磯プリンスホテル	1993.8.26
第 2 回	工藤　　忠	ホテルコスモ横浜	1994.3.31
第 3 回	大井　静雄	大磯プリンスホテル	1994.8.25
第 4 回	藤本　　司	ホテルコスモ横浜	1995.2.17
第 5 回	津金　隆一	大磯プリンスホテル	1995.9.8
第 6 回	千葉　康洋	新横浜プリンスホテル	1996.3.15
第 7 回	山本　勇夫	大磯プリンスホテル	1996.8.30
第 8 回	藤井　康孝	ホテルコスモ横浜	1997.3.28
第 9 回	森井　誠二	大磯プリンスホテル	1997.9.5
第 10 回	桑名　信匡	ホテルコスモ横浜	1998.3.20
第 11 回	阿部　俊昭	湘南国際村センター	1998.7.31
第 12 回	伊藤　昌徳	東京赤坂ザ・フォーラム	1999.3.31
第 13 回	平　　孝臣	東京赤坂ザ・フォーラム	1999.7.30
第 14 回	佐伯　直勝	東洋日本都市センター会館	2000.3.10
第 15 回	森本　哲也	かしはら万葉ホール	2000.8.4
第 16 回	中洲　庸子	ピアザ淡海	2001.7.27
第 17 回	西澤　　茂	ヤマハリゾートつま恋	2002.7.19
第 18 回	伊達　　勲	岡山コンベンションセンター	2003.7.18
第 19 回	宝金　清博	札幌コンベンションセンター	2004.7.16
第 20 回	本郷　一博	長野県松本文化会館	2005.7.15
第 21 回	松村　　明	つくば国際会議場	2006.7.21
第 22 回	佐伯　直勝	かずさアカデミアホール	2007.7.20
第 23 回	伊藤　昌徳	ホテルオークラ東京ベイ	2008.7.18-19
第 24 回	水野　順一	長良川国際会議場	2009.7.10
第 25 回	藤巻　高光	大宮ソニックシティ	2010.7.23-24
第 26 回	池﨑　清信	ヒルトン福岡シーホーク	2011.7.22-23
第 27 回	赤井　卓也	石川県立音楽堂	2012.7.27-28
第 28 回	坂田　勝巳	横浜シンポジア	2013.7.26-27
第 29 回	村垣　善浩	学術総合センター	2014.7.25-26
第 30 回	近藤　　威	淡路夢舞台国際会議場	2015.7.24-25
第 31 回	名取　良弘	嘉穂劇場	2016.7.22-23
第 32 回	荻野　雅宏	大宮ソニックシティ	2017.7.14-15
第 33 回	西岡　　宏	一橋講堂（旧 学術総合センター）	2018.7.20-21
第 34 回	太組　一朗	川崎市国際交流センター	2019.7.26-27
第 35 回	谷口　理章	WEB 開催（淡路夢舞台国際会議場）	2021.11.12-13
第 36 回	柴田　　靖	つくば国際会議場	2022.7.22-23
第 37 回	近　　貴志	パシフィコ横浜	2023.7.28-29
第 38 回	樋口　佳則	一橋講堂	2024.7.19-20

第 1 回から第10回までは SNEF; Shonan Neurosurgery English Forum と称した

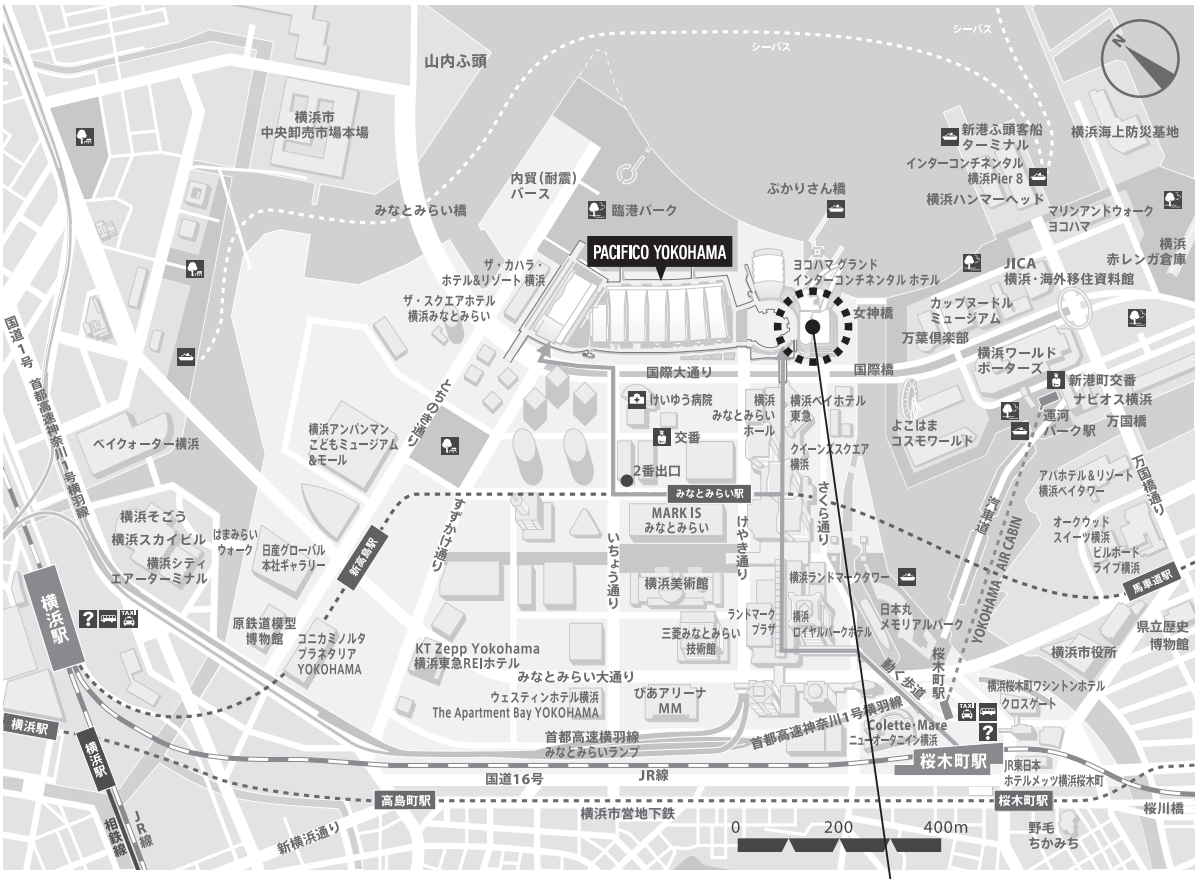
歴代 Sammy's Award 受賞者

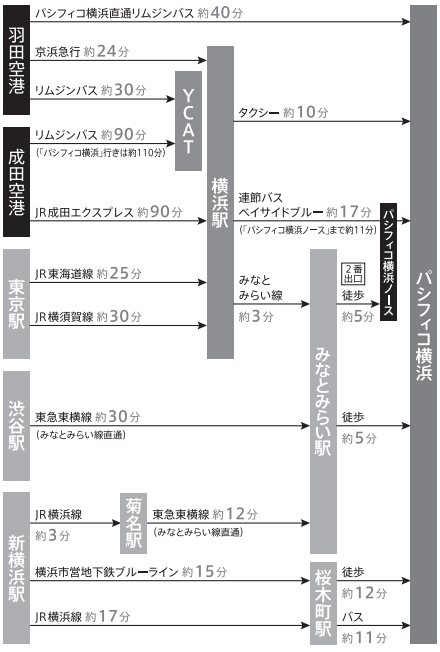
		Winner	所属（受賞時）
第11回		木暮　太郎	東京慈恵会医科大学
第12回		美馬　達夫	高知医科大学
第13回		小山　　徹	信州大学
第14回		石原正一郎	防衛医科大学
第15回	Senior	西澤　　茂	浜松医科大学
	Junior	長島　　久	信州大学
第16回	Senior	常喜　達裕	東京慈恵会医科大学
	Junior	藤井登志春	富山労災病院
第17回	Senior	赤井　卓也	金沢医科大学
	Junior	福住　曜子	東京慈恵会医科大学
第18回	1 位	近藤　　威	神戸大学
	2 位	松山　純子	別府リハビリテーションセンター
	3 位	安田　宗義	日立製作所水戸総合病院
第19回	1 位	藤巻　高光	帝京大学
	2 位	安田　宗義	日立製作所水戸総合病院
	3 位	小股　　整	新潟市信楽園病院
第20回	1 位	安田　宗義	日立製作所水戸総合病院
	2 位	藤本　礼尚	西新潟中央病院
	3 位	森本　哲也	大阪警察病院
第21回	1 位	Adam Tucker	西宮協立脳神経外科病院
	2 位	水野　順一	愛知医科大学
	3 位	大須賀　覚	筑波大学
第22回	1 位	太組　一朗	日本医科大学千葉北総病院
	2 位	廣野誠一郎	千葉大学
	3 位	下地　一彰	順天堂大学練馬病院
第23回	1 位	徳川　城治	順天堂大学
	2 位	大宅　宗一	東京大学大学院医学系研究科
	3 位	秋山　雅彦	富士市立中央病院
第24回	1 位	Nunung Nur Rahmah	信州大学
	2 位	遠藤　俊毅	東北大学
	3 位	菊池陽一郎	岡山大学
第25回	1 位	遠藤　俊毅	東北大学
	2 位	菊池陽一郎	岡山大学
	3 位	中村　　聡	国際医療福祉大学
第26回	1 位	大原　信司	福岡山王病院
	2 位	近　　貴志	新潟県立中央病院
	3 位	下地　一彰	順天堂大学
第27回	1 位	棗田　　学	新潟大学
	2 位	大宅　宗一	埼玉医科大学総合医療センター
	3 位	中村　　聡	国際福祉大学三田病院
第28回	1 位	山下　麻美	鹿児島大学
	2 位	Alexander Zaboronok	筑波大学
	3 位	東田　哲博	小田原市立病院
第29回	1 位	田中　將太	東京大学
	2 位	遠藤　俊毅	東北大学
	3 位	荻野　雅宏	獨協医科大学
第30回	1 位	大宅　宗一	埼玉医科大学総合医療センター
	2 位	藤巻光太郎	京都大学
	3 位	荻野　雅宏	獨協医科大学

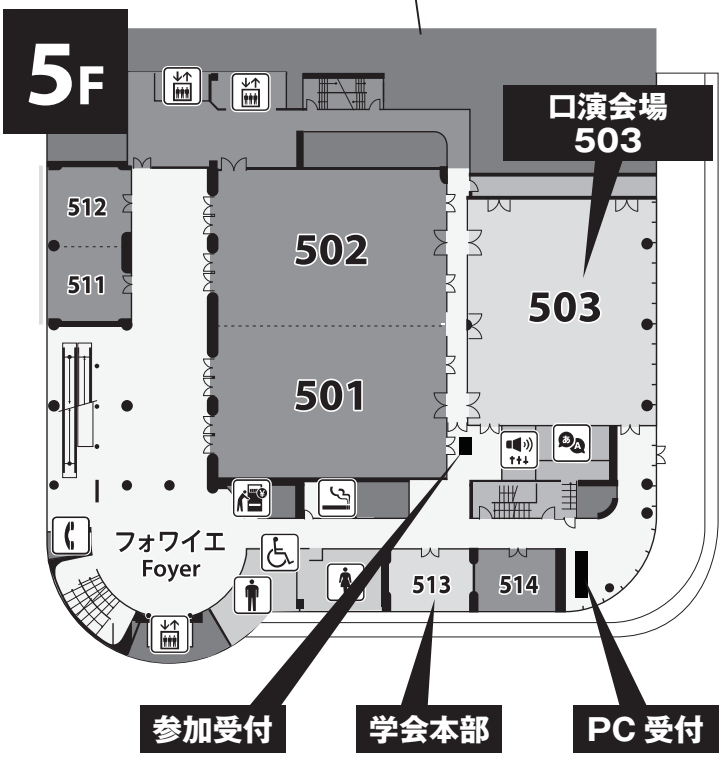
		Winner	所属（受賞時）
第31回	1 位	下地　一彰	順天堂大学
	2 位	丹羽　良子	埼玉医科大学総合医療センター
	3 位	松原　鉄平	九州大学
第32回	1 位	Alexander Zaboronok	筑波大学
	2 位	綿谷　崇史	静岡県立こども病院
	3 位	赤星　　南	筑波大学
第33回	1 位	松橋　阿子	国立成育医療研究センター
	2 位	綿谷　崇史	静岡県立こども病院
	3 位	折口　槙一	千葉大学
第34回	1 位	末永　　潤	横浜市立大学
	2 位	木下　裕介	中村記念病院
	3 位	大倉　英浩	順天堂大学浦安病院
第35回	1 位	我那覇せら	静岡医療センター
	2 位	胡谷　侑貴	岡山大学
	3 位	Alexander Zaboronok	筑波大学
第36回	1 位	三木俊一郎	筑波メディカルセンター
	2 位	朴　　穂貞	横浜市立大学
	3 位	高橋満里奈	埼玉医科大学

会場：パシフィコ横浜会議センター

〒220-0012 神奈川県横浜市西区みなとみらい1-1-1
アクセス　https://www.pacifico.co.jp/visitor/access/tabid/236/Default.aspx







ご案内

1．参会受付

パシフィコ横浜会議センター 5階「503」前フォワイエにて、7月28日（金）午前8:20より受付を開始します。参会者カードに必要事項をご記入のうえ、参会費・年会費（2,000円）をお支払いください。ご発表・ご参加は会員の方に限ります。

参加費区分　※別途年会費（2,000円）をお支払いください。

JNEF + SIGNS	15,000円
JNEF のみ	10,000円
SIGNS のみ	5,000円

- 受付は現金のみです。クレジットカードやデビッドカードはお使いいただけません。おつりの出ないようご準備くださいますようお願いいたします。

2．JNEF 演者の皆様へ

- スクリーン１面、ご連絡した発表時間にてご準備ください。英語表記です。時間厳守をお願いいたします。
- スクリーンサイズは16:9です。
- データは USB フラッシュメモリまたは CD-R に保存してお持ちください。用意している PC は、Windows 10の PowerPoint 2010、2013、2016です。
- OS 標準フォント（MS ゴシック、Arial など）をご使用ください。PowerPoint の「発表者ツール」は使用できません。
- Mac で発表される場合や、発表内で動画をご使用の場合には、ご自身の PC をお持ちください。通常の学会同様、モニターは HDMI もしくはミニ D-sub 15ピンにのみ対応しています。必要に応じて変換ケーブル／コネクタをご準備ください。併せて、必ず電源アダプターをご持参ください。
- プレゼンテーション内に他のデータ（静止画、動画、グラフ等）をリンクさせている場合には、リンク先の元データも同一フォルダにコピー・保存し、作成した PC とは別の PC（Windows 10）にて事前に動作確認をお済ませくださるようお願いします。
- 発表時はレーザーポインターではなくマウスを使用してください。
- データやメディアは、最新のウイルス駆除ソフトでチェックしてからお持ちください。お預かりしたデータは、学会終了後、責任を持って消去いたします。
- 発表の後、フロアやコメンテーターからの質問やコメントに対応してください（ここまでは普通の国際学会と一緒です）。その後、プレゼンテーションについての講評を受けます。厳しい指摘があっても、どうかめげないでください。
- 今回のウェブサイトにある「参考資料集」から『壇上に立つ前のチェックリスト』をダウンロードし、準備にお役立てください。

3．ディスカッサントの皆様へ

３分程度で２つ程度の質問をお願いします。この目的は、発表者になにかアドリブでのディスカッションを引き出すことにあります。もちろん、ディスカッション対応能力も採点対象です。手際よくお願いします。

４．座長、moderator の皆様へ

セッションごとのアナウンスはありませんので、時間になりましたら開始してください。各演題終了後に discussant, floor からの質問を受けて、座長からも質問があればお願いします。その後、Phillip McNally, 岡崎先生、植村先生のコメントを頂いてください。

５．Sammy’s Award

それぞれの発表は Scientific value, English ability, Presentation manner の３つのポイントで評価され、最優秀発表者には Sammy’s Award が贈られます（授与式は初日最後に行います）。周到に準備され、頂点を目指してください。講演時間の超過には減点が課されます。また、過去の最優秀賞受賞者は選考の対象外となります。予めご了承ください。

６．運営委員会

７月28日（金）のランチョンセミナー終了後13：00～13：30、４階　会議室414にて運営委員会を開催いたします。委員の方はご出席ください。

７．懇親会

７月28日（金）19：00より、リストランデ・アッティモにて開催いたします。

懇親会費：5,000円

８．その他

- 服装は例年通り、ノーネクタイのビジネスカジュアルでお越しください。

タイムテーブル

7月28日（金）

9:00～9:10　開会、オリエンテーション

9:10～9:40
教育講演1
演者：植村　研一　座長：近　貴志

9:40～9:50　Break

9:50～9:55　JNEF opening remarks

9:55～10:55
Session Ⅰ
tumor 1
座長：坂田　勝巳、棗田　学

10:55～11:55
Session Ⅱ
tumor 2
座長：藤巻　高光、谷口　理章

12:00～13:00
ランチョンセミナー1
てんかん
演者：佐藤　洋輔　座長：齋藤　紀彦
共催：第一三共株式会社

13:00～13:30　世話人会／休憩

13:35～15:00
Session Ⅲ
endovascular
座長：原　淑恵、赤井　卓也

15:00～16:10
Session Ⅳ
Vascular
座長：徳川　城治、木村　英仁

16:10～17:30
Session Ⅴ
Functional neurosurgery, trauma
座長：太組　一朗、樋口　佳則

17:30～18:30
イブニングセミナー
演者：Aidos Doskaliyev　座長：佐藤　洋輔
共催：株式会社ベアーメディック

18:30　初日閉会

7月29日（土）

9:00～9:15
日英同時通訳研修オリエンテーション

9:15～10:15
日英同時通訳研修Ⅰ
症例報告
座長：安田　宗義

10:20～11:20
日英同時通訳研修Ⅱ
研究
座長：柴田　靖

11:30～12:00
教育講演2
演者：綿谷　崇史　座長：近　貴志

12:00～13:00
ランチョンセミナー2
演者：田村　亮太　座長：佐藤　洋輔
共催：エーザイ株式会社

13:00～14:00
次期会長挨拶
表彰式・団長総括

14:00　閉会

プログラム

7月28日（金）

9:00–9:10　**開会、オリエンテーション**

9:10–9:40　**教育講演1**　　**演者：植村 研一**

座長：近 貴志

9:40–9:50　**break**

9:50–9:55　**JNEF opening remarks**

9:55–10:55　**Session I　tumor 1**

Moderators: Katsumi Sakata, Manabu Natsumeda

a-1 Quantitative analyses of irregular tumor shape may predict tumor progression following tumor removal of WHO grade I meningiomas

Ko Ozaki（Department of Neurological Surgery, Chiba University Graduate School of Medicine）

Discussant: Takamitsu Fujimaki

a-2 A case of osmotic demyelination syndrome after resection of craniopharyngioma masked by concomitant septic shock: importance of serial MR imaging

Tomoko Ikemoto（Department of Neurosurgery, Saitama Medical Center/University）

Discussant: Yasushi Shibata

a-3 Malignant peripheral nerve sheath tumor arising after chemoradiation therapy for pineal germ cell tumor; a case report of pediatric autopsy

Youtarou Okazaki（Department of Neurosurgery, Yokohama City University）

Discussant: Junko Mtatsuyama

a-4 Is re-radiation therapy appropriate for radiation induced high grade glioma occurred post germinoma treatment? Two illustrative cases with molecular analysis and literature review

Yoshihiro Tsukamoto（1. Departments of Neurosurgery, 2 Pathology, and 3Translational Research, Brain Research Institute, Niigata University）

Discussant: Takashi Kon

10:55–11:55 **Session II　tumor 2**

Moderators: Takamitsu Fujimaki, Masaaki Taniguchi

b-1 Pituitary Lymphoma Appeared 9 Years After Resection of Pituitary Adenoma

Yuichiro Koga（Department of Neurosurgery, Faculty of Medicine, University of Toyama）

Discussant: Takeshi Kondo

b-2 Glioblastoma related postoperative late-phase epilepsy caused by increased glutamate release from glioma stem-like cells as a result of transitional expression of CD44 to xCT

Kosuke Kusakabe（Department of Neurosurgery, Ehime University Graduate School of Medicine）

Discussant: Manabu Natsumeda

b-3 Giant aneurysmal bone cyst in the skull base: a case report

Kosuke Adachi（Department of Neurological Surgery, Chiba University Graduate School of Medicine）

Discussant: Jun Suenaga

b-4 Dramatic and prolonged response after a single dose of bevacizumab in a glioblastoma with FGFR3-TACC3 fusion

Manabu Natsumeda（Department of Neurosurgery, Brain Research Institute, Niigata University）

Discussant: Soichi Oya

12:00–13:00　**ランチョンセミナー1**

座長：齋藤 紀彦

State of the Art in Minimally Invasive Epilepsy Surgery and AI Glasses-free 3D Medicine

佐藤 洋輔（昭和大学　脳機能解析・デジタル医学研究所／昭和大学医学部　脳神経外科学講座）

共催：第一三共株式会社

13:00–13:30　**世話人会**

13:35–15:00 **Session III　endovascular**

Moderators: Yoshie Hara, Takuya Akai

c-1 Targeted Temperature Management for Severe Subarachnoid Hemorrhage Using Endovascular and Surface Cooling Systems: A Nonrandomized Interventional Study Using Historical Control

Adam Tucker（Department of Neurosurgery, Japanese Red Cross Kitami Hospital, Kitami, Japan）

Discussant: Yusuke Kinoshita

c-2 Antithrombotics and treatment timing affect functional outcome in Carotid Artery Stenting (CAS) ~Risk analysis in multicenter retrospective study~

So Ozaki（Neurosurgery, Yokohama City University）

Discussant: Takeshi Kondo

c-3 Direct puncture of the superior ophthalmic vein in the embolization of a cavernous sinus dural arterio-venous fistula

Takeru Umemura（Department of Neurosurgery, University of Occupational and Environmental Health, Kitakyushu City, Japan）

Discussant: Hidehito Kimura

c-4 Combined Endovascular Antegrade and Direct Retrograde Carotid Artery Stenting for Chronic and Long Segment Common Carotid Artery Occlusion

Shigeta Miyake（Department of Neurosurgery, Yokohama Brain and Spine Center, Yokohama, Japan）

Discussant: Masaaki Taniguchi

c-5 Efficacy of Penetrating catheter to pass the isolated sinus in dural arteriovenous fistula (dAVF). Two case reports

Marina Hirato（Department of Neurosurgery, Northern Yokohama Hospital of Showa University, Yokohama Kanagawa, Japan）

Discussant: Joji Tokugawa

c-6 A Rare Case of Hemorrhagic Arteriovenous Malformation Coexisting With Developmental Venous Anomaly With Arteriovenous Shunt

Yuya Miyata（Department of Neurosurgery, Yokohama City University Graduate School of Medicine, Yokohama, Kanagawa, Japan）

Discussant: Masahiro Ogino

15:00–16:10 Session IV vascular

Moderators: Joji Tokugawa, Hidehito Kimura

d-1 Carotid artery stenosis was less prevalent in Japanese patients with coronary artery disease and was associated with the extent of coronary artery disease: A Single-center Study

Megumu Suzuki（Department of Neurosurgery, Kyoto University Graduate School of Medicine）

Discussant: Yoshie Hara

d-2 Cerebral aneurysmal walls contain myoglobin that is possibly produced by myofibroblasts and contributes to aneurysm wall thickening

Hidehito Kimura（Department of Neurosurgery, Kobe University Graduate School of Medicine, Kobe, Japan）

Discussant: Takahiro Miyahara

d-3 Preoperative rehearsal sketch by young neurosurgeon and anatomical knowledge are effective for safe and accurate clipping for the middle cerebral artery aneurysm

Fukutaro Ohgaki（Department of Neurosurgery, Graduate School of Medicine, Yokohama City University）

Discussant: Ichiro Takumi

d-4 Endoscopic hematoma removal may reduce the mortality rate and improve the outcome for patients with thalamic hemorrhage combined with intraventricular hemorrhage

Yuhki Takagi（Juntendo University Nerima Hospital, Department of Neurosurgery）

Discussant: Yoshinori Higuchi

d-5 Post-operative symptomatic cerebral vasospasm: Requiring attention following an uneventful resection of an epidermoid cyst

Masashi Higashino（Department of Neurosurgery, Hyogo Prefectural Kobe Children's Hospital）

Discussant: Katsumi Sakata

16:10–17:30 Session V Functional neurosurgery, trauma

Moderators: Ichiro Takumi, Yoshinori Higuchi

e-1 Vascularized craniotomy can be useful in the surgery of depressed skull fractures with open wound

Yoichiro Nakahara（Yame General Hospital, Fukuoka Japan /
Department of Neurosurgery, Kurume University School of Medicine）

Discussant: Takuya Akai

e-2 Visualizing improvements in cognitive function with non-pharmacological therapy using magnetoencephalography (MEG) – Case report

Yoko Hirata（Department of Neurosurgery, Ohashi Hospital, Toho Medical Center /
Department of Neurosurgery, Kumagaya General Hospital）

Discussant: Shunichiro Miki

e-3 Interictal high gamma oscillation regularity analysis and MRI susceptibility weighted imaging or MRI T2* imaging on recurrent alcohol related seizures; implications for alcohol use disorder

Yoshihito Tsuji（Department of Neurosurgery, Matsubara Tokushukai Hospital.）

Discussant: Muneyoshi Yasuda

e-4 Administration of Tranexamic Acid After Burr Hole Craniotomy Reduced Postoperative Recurrence of Chronic Subdural Hematoma in a Japanese Regional Population

Akinori Miyakoshi（Shizuoka Graduate University of Public Health, Shizuoka, Japan./
Department of Neurosurgery, Shizuoka General Hospital, Shizuoka, Japan.）

Discussant: Takashi Kon

e-5 Intraorbital abscess due to inserted bamboo fragment diagnosed by MR imaging and treated with pterional craniotomy: findings of bamboo vary depending on the phase and the moisture content

Yoh Yamakawa（Omuta City Hospital / Yame General Hospital/
Department of Neurosurgery, Kurume University School of Medicine）

Discussant: Takashi Araki

e-6 The analysis of cerebrospinal flow dynamics in mouse fetuses - Cerebrospinal fluid may flow out from the brain through the frontal skull base and choroid plexus -

Takuya Akai（Department of Neurosurgery, Graduate School of Medicine and Pharmaceutical Science, University of Toyama, Toyama, Japan）

Discussant: Kazuaki Shimoji

17:30–18:30　イブニングセミナー

座長：佐藤 洋輔

Surgical treatment of drug-resistant epilepsy in Kazakhstan

Aidos Doskaliyev（Strategy and science director, National Centre for Neurosurgery）

共催：株式会社ベアーメディック

18:30　初日閉会

7月29日（土）

9:00–9:15　日英同時通訳研修オリエンテーション

9:15–10:15　日英同時通訳研修 I　症例報告　　**座長：安田 宗義**

i-1　手術用ロボティックシステムを使用した脳腫瘍手術

昭和大学　脳神経外科　小林 裕介

i-2　高密度脳波データを用いたサンプルエントロピー解析による非侵襲的言語優位半球判定法

昭和大学　脳神経外科　川内 雄太

i-3　急性腎不全出現後に化学療法を継続しえた中枢神経系原発悪性リンパ腫の一例

新潟大学　脳研究所　脳神経外科　齋田 学

10:15–10:20　break

10:20–11:20　日英同時通訳研修 II　研究　　**座長：柴田 靖**

ii-1　我が国の臓器提供における将来への課題

川崎市立多摩病院　脳神経外科　小野 元

ii-2　髄芽腫における SLFN11発現による DNA 障害型抗がん剤への感受性増強

新潟大学　脳研究所　脳神経外科　齋田 学

ii-3　血管解剖から考える眼窩内腫瘍手術戦略

横浜市立大学　脳神経外科　末永 潤

11:30–12:00　教育講演 2　研究・臨床・創薬を経て考える、自分を売り込む英語

演者：綿谷 崇史（T&T ブレインサイエンス）

座長：近 貴志

12:00–13:00　ランチョンセミナー2

座長：佐藤 洋輔

脳腫瘍に対するドラッグリポジショニングと新たな橋渡し研究

田村 亮太（慶應義塾大学医学部　脳神経外科）

共催：エーザイ株式会社

13:00–14:00　次期会長挨拶

13:00–14:00　表彰式・団長総括

14:00　閉会

招待演者略歴

イブニングセミナー

Aidos Zhaxylykovich DOSKALIYEV, MD, PhD

Strategy and science director,
National Centre for Neurosurgery.

Work experience

National Center for Neurosurgery, Astana.
From June 12, 2012 to September 5, 2016. Neurosurgeon, Department of Central Nervous System Pathology.

- Introduced 3 new medical technologies:
  - “Microsurgical removal of brain tumors with conserved consciousness”;
  - “Microsurgical removal of brain gliomas using intraoperative fluorescence”;
  - “Intracarotide temporary anesthesia of each of the cerebral hemispheres - Wada test.”
- Scientific research: “Clinical significance of IDH-1 dependent molecular markers and hematological indicators of systemic inflammation in patients with brain gliomas.”
- Consultation of patients the brain tumors in the other medical centers and clinics.
- Member of the Association of Neurosurgeons of Kazakhstan.
- Reviewer of the journal Neurosurgery and Neurology of Kazakhstan.
- Reviewer on the clinical analysis of lethal outcomes.

Kazakh National Medical University S.D. Asfendiyarov.
From September 5, 2016 to November 20, 2017. Vice-rector for Clinical Work.

- Strategy determination according to the goals of university clinics.
- Creation of an academic health science system (AHSS).
- Monitoring the clinical activities of university clinics.
- Monitoring the clinical activities of clinical chairs.
- Preparation for accreditation for compliance with requirements to medical organizations.
- Preparation of applications for the provision of clinical services.
- Preparation of clinics and training of the population for the implementation of the work of the social medical insurance fund.

National Center for Neurosurgery, Astana.
From November 20, 2017 to July 2, 2021. Scientific secretary. Head of research management department.

- Formulation of a work plan for the department.
- Monitoring the effectiveness of the quality performance indicators.
- Organization of research works. Selection of methods and means for conducting researches, ways of solving scientific and technical problems.
- Designate co-executors of scientific programs.
- Working out on clinical protocols.
- Scientific research: “New medical technologies for improving the results of treatment of chronic diseases and consequences of trauma with severe loss of functions and severe complications”, “Development of a new neurotropic drug: pharmacological and clinical studies”, “Study of the immunological reaction and pathomorphological changes during the use of VMA in dura mater plastics in rabbits”, “Development of a program for molecular cytogenetic studies and creation of a biobank of tumors of the central nervous system”.

National Center for Neurosurgery, Astana.
From July 2, 2021 to present. Strategy and Science Director.

- Formation and implementation of scientific aspects of the policy and development strategy of the center.
- Coordination and monitoring of scientific activities.
- Development of effective management programs.
- Evaluation of the quality of management and development of the center.
- Analysis of socio-economic indicators of the center.
- Choosing a strategy and setting development priorities.
- Coordination of technology transfer to the regions of Kazakhstan.
- Control over the organization of training in the field of neurosurgery.
- Formation and implementation of personnel policy.

Education
S.D. Asfendiyarov Kazakh National Medical University, Treatment faculty – 1999-2005.
Kazakh Medical Academy Internship, Neurosurgery – 2005-2006.

Postgraduate
Department of Neurosurgery, Graduate School of Biomedical and Health Sciences, Hiroshima University, Japan. PhD, Neurosurgery – 2006-2011.
Good Clinical Practice training courses – 2-6.12.2014.
Educational seminar "Fluorescence-guided microsurgical resection of gliomas". Munich, Germany – 03.08.2015 – 28.08.2015.
Astana Medical University, retraining in «Pathological Anatomy» - 26.10.2015 – 19.02.2016.
14.07.2017 г. – 28.07.2017 Training on Creating an Academic Health Science System. Duke Medicine Global. Durham, NC. USA.

Dissertational (PhD) study
Title of study: "Lymphomas and glioblastomas: Differences in the apparent diffusion coefficient evaluated with high *b*-value diffusion-weighted magnetic resonance imaging at 3T".
Research was done from 2006 to 2011 in Hiroshima University, Hiroshima, Japan.
Defense of dissertation was in January 27, 2011.
Acceptance was by the President and Board of the Graduate School of Hiroshima University.

Teaching experience
Lectures for postgraduate program for neurosurgery residences – 2013-2016, 2017-present. (Neuroanatomy, Neurosurgical approaches, Neurooncology).
Scientific consultant for doctoral students: "The strategy of perioperative management of patients with chronic hemorrhoids". "Ways to improve the perioperative management of patients with aesthetic upper blepharoplasty".
Reviewer of the Dissertation for the award of the academic degree of Master of Medical Sciences: "Evaluation of the quality of life of patients with glial brain tumors" in 2016 and "Comparative characteristics of cranioplastic with depressed fractures of the outer wall of the frontal sinuses" in 2018.

Languages proficiency
- Kazakh language – native;
- Russian, English – fluently;
- Turkish, Japanese – basic communication skills.

招待演者略歴

教育講演2

綿谷　崇史
（わたや　たかふみ）

T&T ブレインサイエンス　CEO

略歴

2000	京都大学医学部卒業
2000-2004	京都大学脳神経外科関連研修施設にて研修
2004-2008	理化学研究所発生・再生総合医療センター　大学院
2008	医学博士
2008-2010	Postdoctoral Fellow, Brigham and Women’s Hospital, Neuro-oncology lab. Department of Neurosurgery
2010-2011	Neuro-oncology Clinical Fellow, Toronto Western Hospital, Division of Neurosurgery
2011-2013	Pediatric Neurosurgery Clinical Fellow, Hospital for Sick Children, Toronto
2013-2020	静岡県立こども病院　脳神経外科医長
2020-2021	シニアメディカルディレクター、バイオジェン・ジャパン
2021- 現在	Executive Scientific Director, 中外製薬株式会社
2021 現在	T&T ブレインサイエンス創業

JNEF2023

ABSTRACT

a-1 Quantitative analyses of irregular tumor shape may predict tumor progression following tumor removal of WHO grade I meningiomas

Ko Ozaki, Shigeki Nakano, Kentaro Horiguchi, Seiichiro Hirono, Tomoo Matsutani, Yoshinori Higuchi

Department of Neurological Surgery, Chiba University Graduate School of Medicine

Objective: Although irregular tumor shape of meningiomas has been reported as a recurrence factor, most reports evaluated tumor shape by qualitative evaluation, which is less reliable. In this study, preoperative tumor shape was quantitatively analyzed for evaluating quantitative tumor shape analysis as a factor of tumor progression following surgery.

Material and methods: A retrospective analysis of 318 patients who underwent initial surgery for removal of meningiomas at our institution between January 2007 and September 2021 was performed. The histological diagnosis, degree of resection, MIB-1 LI, and tumor localization, progression-free interval were investigated. 194 patients with immunohistochemical examinations were included for the analysis of MIB-1 LI. The imaging analysis included 238 relatively recent cases, and tumor shape irregularities were quantitatively evaluated using the MatLab® image processing tool. Time to recurrence or progression was analyzed by the Kaplan-Meire analysis with Cox proportional hazards ratio.

Results: MIB-1 LI> 5%, degree of resection (subtotal resection, STR), and posterior fossa location were significantly different in progression-free survival in univariate analysis. In the analyses of imaging findings, among maximum diameter, tumor shape irregularity, and peritumoral edema, only tumor shape irregularity was significantly related to progression-free survival. Multivariate analysis of the four significant recurrence factors revealed that only STR and tumor irregular shape were significantly related to progression-free survival. Tumor shape irregularity was evaluated for circularity and solidity, both values were significant recurrence factors in WHO Grade 1 meningiomas. These quantitative factors were independent predictive factors for tumor progression from MIB-1 LI.

Conclusion: Tumor shape irregularity could be objectively evaluated by image analyses and could predict residual tumor progression following surgery. Considering both preoperative and histological findings, we should consider adjuvant treatment options, such as postoperative stereotactic radiotherapy, with view to long-term tumor control.

Key words:
Circularity, 真円率；Solidity, 凸包, tumor shape, 腫瘍形状；irregularity, 輪郭不整

a-2 A case of osmotic demyelination syndrome after resection of craniopharyngioma masked by concomitant septic shock: importance of serial MR imaging

Tomoko Ikemoto, Shunya Hanakita, Soichi Oya

Department of Neurosurgery Saitama Medical Center/University

Background: Osmotic demyelination syndrome (ODS) is triggered by the rapid correction of hyponatremia from a state of prolonged severe hyponatremia. We present a case report of ODS during the correction of hyponatremia after resection of craniopharyngioma.

Case description: A 55-year-old man with fatigue lasting for a few months followed by disorientation was referred to our hospital. Endocrinological and radiological examinations revealed severe pituitary dysfunction and a large craniopharyngioma. He underwent a gross total resection of the tumor. His symptoms remarkably improved. A few weeks after he was transferred to a rehabilitation facility, he developed to have lethargy due to hyponatremia (serum sodium concentration 106mEq/L). He was readmitted to our hospital to correct hyponatremia. Unfortunately, the sodium level was corrected inadvertently rapidly during a following week. His consciousness deteriorated and became comatose; however, it was complicated to determine the reason of his disturbed consciousness because he also suffered from septic shock due to urinary infection. MR images on the 7th day demonstrated no abnormality, but those obtained on the 15th day demonstrated hyperintensity in the bilarteral basal ganglia on the FLAIR image. His conscisousness showed gradual improvement. MR images on the 31st day delineated FLAIR hyperintensity in the pons as well, indicating that the main cause of his disturbed consciousness was ODS.

Conclusion: It can be difficult to diagnose ODS in the early period. Abnormal findings may not be evident on MR imaging immediately after onset, necessitating repetitive evaluations with intervals of 1–2 weeks for definitive diagnosis.

Key words:
頭蓋咽頭腫、低 Na、浸透圧性脱髄症候群、橋中心脱髄症候群、汎下垂体機能低下症
craniopharyngioma, hyponatremia, osmotic demyelination syndrome, central pontine myelinolysis, panhypopituitarism

a-3 Malignant peripheral nerve sheath tumor arising after chemoradiation therapy for pineal germ cell tumor; a case report of pediatric autopsy

Youtarou Okazaki, Jun Suenaga, Takahiro Tanaka, Katsumi Sakata, Tetsuya Yamamoto

Department of Neurosurgery, Yokohama City University

Background: Malignant peripheral nerve sheath tumor（MPNST）accounts for about 1% of all of the nerve sheath tumors. This case is rare in the way that develops in the brain and is a pediatric case.

Case presentation: A 13-year-old boy presented to previous hospital with convulsion and headache. Endoscopic third ventriculostomy and biopsy were performed for pineal parenchymal tumor and obstructive hydrocephalus. Histopathological diagnosis showed germinoma and he received chemoradiation therapy. After initial treatment, the tumor shrunk and didn't disseminate. However, two months later enhancement lesion at C4 and L5 of the spinal cord appeared and referred to our hospital. Pathological diagnosis of L5 lesion biopsy was perineurioma. Four months later, right acoustic tumor occurred and the spinal tumors enlarged, therefore the chemotherapy started. But a month later, new left acoustic tumor developed and bevacizumab treatment was not effective. Right acoustic tumor was resected and pathological diagnosis was MPNST. Clinical course was progressive and deteriolated as communicating hydrocephalus, intraventricular dissemination and hemorrhage from tumors. The autopsy revealed that there was no residual tumor in the pineal body macroscopically and probable cause of death were spread of MPNST and multiple intracranial hemorrhage.

Discussion: MPNST commonly arises from patients with neurofibronomatosis type I and following radiation therapy. This case was not neurofibronomatosis type I and the spinal cord and both sides of cerebellopontine angle were not within the radiation field. The genetic analysis is now undergoing and may illuminate a connection of germ cell tumor and malignant peripheral nerve sheath tumor.

Key words: Malignant peripheral nerve sheath tumor 悪性末梢神経鞘腫 , Pediatric brain tumor 小児脳腫瘍 , Germ cell tumor 胚細胞腫瘍

a-4 Is re-radiation therapy appropriate for radiation induced high grade glioma occurred post germinoma treatment? Two illustrative cases with molecular analysis and literature review

Yoshihiro Tsukamoto[1], Manabu Natsumeda[1], Haruhiko Takahashi[1,2], Masayasu Okada[1], Hiroshi Shimizu[2], Kouichirou Okamoto[3], Akiyoshi Kakita[2], Makoto Oishi[1]

Departments of Neurosurgery[1], Pathology[2], and Translational Research[3], Brain Research Institute, Niigata University

Introduction: Germinomatous germ cell tumor is highly sensitive to chemoradiotherapy; patients are expected to survive long-term for decades. Many radiation-induced malignant gliomas (RIMGs) occur more than 10 years after radiotherapy. Standard therapy for RIMG has not yet been established because of its rarity, shorter survival period of the patients, and the risk of radiation necrosis by re-irradiation.

Case reports: Two patients, 32-year-old and 50-year-old men, developed glioblastomas more than 20 years after radiation monotherapy for the germinomas with/without mature teratoma. The first patient showed a tumor mass in the left temporal lobe and dissemination and died 2 months after partial resection of the tumor without response to the chemotherapy using temozolomide and bevacizumab. Methylation classifier analysis classified closest to "MC Diffuse Pediatric Type High Grade Glioma, Rtk1 Subtype, Subclass A (novel)". The second patient showed tumor mass in brain stem and cerebellar peduncle which worsened progressively during temozolomide and bevacizumab treatment. The tumor transiently responded to CyberKnife therapy. However, the patient died of aspiration pneumonia due to tumor recurrence 11 months after the biopsy. Methylation classifier analysis classified closest to "MC Pilocytic Astrocytoma, Infratentorial".

Discussion and Conclusion: Although the methylation classifier analysis did not clearly classify our two cases as RIMGs, molecular features might influence clinical, locational, and pathological features. Chemoradiotherapy may improve survival of RIMG patients.

Key words: re-irradiation（再照射）, germinoma（胚種）, glioblastoma（膠芽腫）, radiation-induced glioma（放射線誘発性神経膠腫）, methylation classifier analysis（メチル化解析）, radiotherapy（放射線治療）, SRT（定位照射）, CyberKnife（サイバーナイフ）

b-1 Pituitary Lymphoma Appeared 9 Years After Resection of Pituitary Adenoma

Yuichiro Koga, Takuya Akai, Taisuke Shiro, Satoshi Kuroda

Department of Neurosurgery, Faculty of Medicine, University of Toyama

Background: Pituitary lymphomas are very rare. Moreover, less than 10 cases of pituitary lymphoma had co-existing or had history of pituitary adenomas.

Case description: 51 years-old women presented with visual disturbance. She had a history of pituitary adenoma that was resected through endonasal trans-sphenoidal surgery (eTSS) 9-years before her presentation. Her previous annual follow-up did not show any signs of recurrence. She complained visual disturbance. One month later, her visual acuity rapidly got worse with headache and fatigue and was referred to our hospital. On examination, she had bilateral quadanopsia. Her laboratory data showed slightly increased prolactin. Magnetic resonance images showed mass in the sella with suprasellar extension. She underwent eTSS, and the mass was resected. Visual symptoms had improved transiently, however ophthalmoplegia appeared 2 weeks after the operation which indicated intrathecal dissemination. The histology confirmed the diagnosis of T-lymphoblastic lymphoma. Positron emission tomography showed the tracer accumulation at pancreas, which was also confirmed as lymphoma with biopsy. She went through chemotherapy including cyclophosphamide, vincristine sulfate, doxorubicin hydrochloride, dexamethasone, and methotrexate. Despite several months of treatment, she has died.

Conclusion: Pituitary lymphomas have poor prognosis due to its aggressive features. We cannot simply assume that pituitary growing mass after pituitary adenoma resection is a recurrence. Immediate biopsy and confirmation of the diagnosis is necessary for the pituitary mass with aggressive feature.

Key words: pituitary lymphoma, quadanopsia, T-lymphoblastic lymphoma, opthalomoplegia, intrathecal dissemination, endonasal trans-sphenoidal surgery, chemotherapy

b-2 Glioblastoma related postoperative late-phase epilepsy caused by increased glutamate release from glioma stem-like cells as a result of transitional expression of CD44 to xCT

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Background and objective: In our recent Glioblastoma (GBM) cases, postoperative epilepsy mostly occured later than twenty-eight days after surgery. CD44, a stem cell marker, is known to relate with tumor cell invasiveness, however, little are known with epilepsy nor glutamate. This study aims to investigate the relationship between CD44 and the pathology of this post operative late-phase epilepsy.

Materials and Methods: A total of eight GBM cases received surgery and the same postoperative treatment at our institute were divided into two groups; 3 cases of epilepsy onset, group E, and 5 cases without it, group NE. In each group, the tumor was separated into core and periphery, from which glutamate (Glu) was measured with expression of CD44 and xCT examined by Western blot analysis. The same objects were also examined on our three glioma stem-like cell (GSC) lines.

Results: Group E showed higher Glu than group NE both in the core and periphery. CD44 was expressed significantly higher in group E in the periphery, and xCT was higher in group E both in the core and periphery. Among the GSCs, GSC-2 had the highest CD44 expression while having the lowest xCT and extracellular Glu. In addition, CD44 knockdown in GSC-2 resulted in significant increase of xCT expression and extracellular Glu.

Conclusion: Decrease of CD44 and the oppositely increased xCT and extracellular Glu could be the possible cause of GBM related postoperative late-phase epilepsy.

Key words: Glioblastoma 膠芽腫 , Glioma stem-like cell 神経膠腫幹細胞様細胞 , epilepsy てんかん , Glutamate グルタミン酸 , CD44, xCT

b-3 Giant aneurysmal bone cyst in the skull base: a case report

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Backgrounds: Aneurysmal bone cysts (ABCs) are benign vascular tumors caused by a disturbance in the intraosseous circulation. These lesions usually involve the metaphysis of the long tubular bones of patients younger than 20 years; however, ABCs in the skull base are rare.

Case presentation: A 39-year-old man presented with acute visual impairment. Then, he experienced complete visual loss in the right eye and severe hearing impairment in the right ear. Preoperative magnetic resonance images and computed tomography scans showed multiple cystic lesions in the right middle cranial fossa, compressing the right temporal lobe.

We performed tumor resection through frontotemporal craniotomy and left only a tiny amount of tumor in the middle cranial fossa. Nevertheless, the residual tumor rapidly regrew in the middle fossa 8 months later. We conducted a second operation via a combined transcranial and transnasal approach, achieving complete resection.

Discussion and Conclusion: The optimal treatment for ABC is total resection. However, total resection is sometimes difficult because of the large lesion extending to the skull base. In skull base ABCs, partial excision or intratumoral curettage is recommended. In our case, we decided to perform secondary surgery for radical resection and successfully excised the residual tumor. A close follow-up would be necessary following surgery in young patients or patients with pathological findings demonstrating cellular lesions in the majority area, suggesting the possibility of a high recurrence rate. Further research is needed to create efficient treatment strategy.

key words: Bone tumor, 動脈瘤様骨嚢胞, aneurysmal bone cyst, 中頭蓋底, middle skull base

b-4 Dramatic and prolonged response after a single dose of bevacizumab in a glioblastoma with *FGFR3-TACC3* fusion

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Background: Three percent of glioblastomas are known to harbor oncogenic *FGFR3-TACC3* fusions. These glioblastomas are pathologically characterized by frequent calcification and high expression of CD34-positive blood vessels. Here we report a dramatic and prolonged response to only a single dose of bevacizumab in a glioblastoma with *FGFR3-TACC3* fusion and speculate as to why this dramatic response was observed.

Case Presentation: A 65-year-old female patient presented with seizures. Head scans showed a calcified lesion of the right temporo-parieto-occipital lobes, and a partial resection was performed under the preoperative diagnosis of oligodendroglioma. Surprisingly, the pathological diagnosis was glioblastoma, so a second surgery was performed to remove the remaining tumor. During concomitant temozolomide and radiation the tumor relapsed, so genome panel testing was performed, revealing *FGFR3-TACC3* fusion. The patient subsequently entered a clinical trial but was taken off the trial after 5 months due to progressive disease. The patient also suffered from hand-foot syndrome caused by the experimental medication. The patient refused a third surgery, so temozolomide and bevacizumab was administered. After just one course of bevacizumab, the patient's hand-foot syndrome worsened, and chemotherapy was discontinued. Surprisingly, a dramatic and prolonged response to bevacizumab was observed, and the patient stayed off chemotherapy for 10 months until relapse. Temozolomide and bevacizumab have been re-administered, showing similar, dramatic effects.

Discussion: Glioblastomas with *FGFR3-TACC3* fusions are known to have high expression of CD34-positive blood vessels and may respond to antiangiogenic therapy. Additionally, the experimental medication administered during the clinical trial may have sensitized the tumor to bevacizumab treatment.

Conclusion: *FGFR3-TACC3*-positive glioblastomas can be super-responders to bevacizumab treatment.

Key words: glioblastoma 膠芽腫 ; fusion gene 融合遺伝子 ; calcification 石灰化 ;
hand-foot syndrome 手足症候群 ; antiangiogenic therapy 血管新生阻害療法 ;
clinical trial 治験 ; bevacizumab ベバシズマブ (アバスチン®)

c-1 Targeted Temperature Management for Severe Subarachnoid Hemorrhage Using Endovascular and Surface Cooling Systems: A Nonrandomized Interventional Study Using Historical Control

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Objective: To study the effect of endovascular targeted temperature management (TTM) after rewarming from initial surface cooling during a high-risk period for delayed cerebral ischemia.

Methods: We studied patients with World Federation of Neurological Surgeons grade V SAH before and after the introduction of endovascular TTM. Both groups (36 patients each) were treated with TTM at 34 °C with conventional surface cooling immediately after SAH diagnosis, together with emergency aneurysm repair. When rewarmed to 36 °C, around 7 days later, the study group underwent TTM at 36 to 38 °C for 7 days with an endovascular cooling system. The control group was treated with antipyretics.

Results: Sex, age, Glasgow Coma Scale score, modified Fisher computed tomography classification, aneurysm location, and treatment methods were not different between the study and control groups. Differences were detected in the incidence of fever >38 °C (13 vs 26 patients, P = .0021), duration of fever >38 °C (4.1 vs 18.8 hours, P = .0021), incidence of vasospasm-related cerebral infarction (17% vs 42%, P = .037), and the likelihood of excellent outcomes (0 and 1 on a modified Rankin Scale) at 6 months (42% vs 17%, P = .037). In endovascular TTM, shivering occurred more frequently in patients with better outcomes, requiring aggressive treatment to avoid fever.

Conclusion: Endovascular TTM at 36 to 38 °C after surface cooling was feasible and safely performed in patients with severe SAH. Combined TTM for 2 weeks was associated with a lower incidence of vasospasm-related infarction and may improve outcomes.

Key Words: Endovascular cooling, Subarachnoid hemorrhage, Targeted temperature management
血管内冷却, くも膜下出血, **体温管理療法**

c-2 Antithrombotics and treatment timing affect functional outcome in Carotid Artery Stenting (CAS) ~Risk analysis in multicenter retrospective study~

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Objective: For internal carotid artery stenosis, Carotid Artery Stenting (CAS) is sometimes adapted for patients with CAS risks or Carotid Endarterectomy (CEA) risks. Appropriate treatment timing for stroke onset is also controversial. This study aimed to clarify the prognostic factors of CAS for functional outcomes and complications.

Methods: This is a multicenter retrospective study for 152 CAS cases in 3 facilities in Yokohama, analyzing the risk factors such as patient background, CAS or CEA risks, stenosis characteristics, and treatment methods and timing. We defined CAS risks as tortuosity, calcification, eGFR <30, and etc. We also defined CEA risks as triple antithrombotic drugs, higher lesion, lung disease, and etc. The patients with stroke-onset were divided into some groups based on treatment timing. The primary endpoint was modified-Rankin-Scale(mRS) change after 90 days, and the secondary endpoint was perioperative complications.

Results: The subjects had an average NASCET stenosis rate of 68.3% and lesion length of 20.5 mm. There were 107 patients (70.3%) with CAS risks and 70 patients (46.0%) with CEA risks. After 90 days, mRS deteriorated in 21 (13.8%) and symptomatic complications happened in 20 (13.1%). In multivariate analysis, treatment timing ($p < 0.01$), triple antithrombotic drugs ($p < 0.01$) among CEA risks, and highly calcified lesion ($p = 0.02$) among CAS risks are independent factors for mRS worsening. Treatment timing ($p < 0.01$) is also related to complications in univariate analysis.

Conclusion: This study established that treatment timing for stroke onset and triple antithrombotic treatment affect patient's prognosis. In these cases, treatment indications should be considered carefully and warrants further studies.

Key words: carotid artery stenosis, carotid artery stenting, antithrombotic, treatment timing, stroke
頸動脈ステント、抗血栓薬、脳卒中、レジストリー研究、リスク解析

c-3 Direct puncture of the superior ophthalmic vein in the embolization of a cavernous sinus dural arterio-venous fistula

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Background: Superior ophthalmic vein (SOV) is an important access point to treat cavernous sinus dural arterio-venous fistulas (CS-dAVF), which do not have posterior drainage routes. Generally, SOV is accessed through a facial vein due to the risk of intra-orbital hemorrhage and nerve injury by direct puncture. However, in some cases, accessing to the CS is difficult due to tortuosity. Therefore, it is necessary to choose the direct puncture to obliterate CS-dAVF. Here, we effectively accessed by direct puncture of the SOV to treat CS-dAVF.

Case description: A 68-year-old female presented with a swollen left eye for a few months in our hospital. Magnetic resonance imaging (MRI) showed CS-dAVF. Cerebral angiography revealed a dAVF involving the left cavernous sinus, which was fed by the artery of the foramen rotundum and middle meningeal artery (MMA), and then fed to CS-dAVF and drained only into the superior opthalmic vein (SOV). Three-dimensional rotational angiography showed a shunted pouch, which was located postero-lateral to the cavernous sinus. It was difficult to access the CS because of the tortuosity of the drainage vein. Therefore, it was treated via SOV direct puncture. Intra-orbital hemorrhage occurred intraoperatively. However, performing successful embolization allowed the patient to recover.

Conclusion: SOV direct puncture is a useful method to access CS. However, it needs to take care of the complications. We report some cautions to this approach.

Key words: endovascular treatment, dural-AVF, Cavernous sinus, SOV, direct puncture, IPS, intra-orbital hemorrhage, nerve injury, middle meningeal artery, artery of foramen rotundum

c-4 Combined Endovascular Antegrade and Direct Retrograde Carotid Artery Stenting for Chronic and Long Segment Common Carotid Artery Occlusion

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Ojbective: Common carotid artery occlusion (CCAO) is a rare cause of ischemic stroke and bypass surgery is the common treatment approach. However, safer alternatives should be developed to treat CCAO.

Case and Method: A 68-year-old male was diagnosed with left-sided CCAO with decreased left visual acuity due to neck radiation therapy for laryngeal cancer. Recanalization therapy using a pull-through technique was initiated because cerebral blood flow progressively decreased during follow-up. First, after a short sheath was inserted into the common carotid artery (CCA), the occluded CCA was retrogradely penetrated through the sheath. Second, a micro-guide wire was guided to the aorta from the femoral sheath where it was caught using a snare-wire guided from the cervical sheath. Subsequently, the micro-guide wire was gently pulled out from the cervical sheath, penetrated the occluded lesion, and was secured to the femoral and cervical sheaths. Finally, the occluded lesion was dilated using a balloon and the stent was placed. The patient was discharged uneventfully five days post-procedure and exhibited improved left visual acuity.

Conclusion: Combined endovascular antegrade and direct retrograde carotid artery stenting is a versatile and minimally invasive treatment option for CCAO in terms of reliable penetration of obstructive lesions and reduction of embolic and hemorrhagic complications.

Key words: Common carotid artery occlusion, recanalization therapy, endovascular antegrade, direct retrograde, carotid artery stenting

c-5 Efficacy of Penetrating catheter to pass the isolated sinus in dural arteriovenous fistula (dAVF). Two case reports

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Background: In dAVF with sinus occlusion, it is difficult to approach the site of obstruction when treated with transvenous embolization (TVE). We report here two cases which the Corsair armet (ASAHI INTECC) made possible to penetrate the occlusion.

Case report: (Case1) A woman in her 60s was referred to our hospital due to left throbbing tinnitus. Digital subtraction angiography (DSA) revealed a left Sigmoid Sinus (SS) dAVF (Cognard Ⅱ ab, Borden Ⅲ), and TVE was performed. We attempted to pass through the occlusion using a conventional microcatheter (MC) and a micro guidewire (MGW), but only the MGW crossed the lesion and the MC did not follow. After we exchanged the MC to a Corsair armet, it easily penetrated the lesion and successfully completed coil embolization. She was discharged home without additional neurological symptoms. (Case2) A woman in her 80s was admitted with sudden sensory aphasia, and head computerized tomography (CT) revealed left temporal lobe subcortical hemorrhage. She also diagnosed with left transverse sinus (TS) to SS dAVF (Cognard Ⅲ , Borden Ⅲ) on DSA and TVE was performed. As in Case 1, we attempted to pass through the occlusion using a conventional MC/MGW, but didn't. So, we used Corsair armet, which easily penetrated. We did TVE with coil and NBCA, and confirmed shunt disappearance. After that, the stasis brain edema was getting better, and she was transferred to a rehabilitation hospital.

Conclusion: The Corsair armet is conventionally used as a penetrating catheter of peripheral arterial occlusion. In our cases, we could pass the obstructed lesion smoothly with this device, and it will be one of a recommendable method for TVE of dAVF with sinus occlusion.

Key words: #endovasculer therapy #dural arteriovenous fistula #transvenous embolization #penetrating catheter # isolated sinus

c-6 A Rare Case of Hemorrhagic Arteriovenous Malformation Coexisting With Developmental Venous Anomaly With Arteriovenous Shunt

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Background: Developmental venous anomaly (DVA) is composed of umbrella-shaped collection of dilated medullary veins, which is usually benign and found incidentally. DVA with early venous filling is rare and unknown etiology, which is categorized into DVA with arteriovenous (AV) shunt and DVA with arteriovenous malformation (AVM). Furthermore, AVM coexisting with DVA with early venous filling has never been reported. We demonstrate an exceedingly rare case of hemorrhagic AVM coexisting with DVA with AV shunt**.**

Case Description: A 18-year-old female patient with known right cerebellum vascular malformation presented impaired consciousness (GCS 5) and transferred to our hospital. Head computed tomography revealed a right cerebellar hemorrhage with transtentorial upward herniation. She underwent emergent resection of hematoma by the posterior fossa craniotomy. Postoperative cerebral angiogram confirmed the right cerebellum AVM showing feeding arteries arising from superior cerebellar arteries (SCA) and early venous drainage into superior petrosal sinus. DVA with AV shunt of which feeding artery arising from posterior inferior cerebellar artery and superficial venous drainage forming caput medusae was also demonstrated incidentally. AVM was treated with targeted transarterial embolization of SCA, and the subsequent removal was successfully performed. The patient was gradually improved in disturbance of consciousness and was transferred to a rehabilitation hospital.

Conclusion: A case of AVM coexisting with DVA with AV shunt is exceedingly rare. To avoid missing out it, it is important to interpret imaging studies such as magnetic resonance imaging and cerebral angiogram in detail.

Key words: arteriovenous malformation　動静脈奇形 , developmental venous anomaly　静脈血管奇形 , arteriovenous shunt　動静脈シャント

d-1 Carotid artery stenosis was less prevalent in Japanese patients with coronary artery disease and was associated with the extent of coronary artery disease: A Single-center Study

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Objective: The studies on internal carotid artery stenosis (ICS) among patients with coronary artery disease (CAD) have been mainly surgical series, targeting the patients with scheduled coronary artery bypass surgeries. Especially in Asian countries, the clinical series are scant. We aimed to determine the prevalence of ICS in the Japanese patients with CAD and to investigate the associations between severity of ICS and the extent or degree of stenosis in CAD.

Materials and Methods: The patients undergoing coronary angiography for diagnosis of were enrolled. ICS was defined as area stenosis ≥ 50% on ultrasonography and the severity of was classified (mild/ moderate/ sever). Coronary arteries were assessed by angiography in terms of the extent (1/ 2/ 3 vessel disease) and the degree of stenosis (≥ 25%/ ≥ 50%/ ≥ 75%/ 100% stenosis).

Results: Out of 131eligible patients (age 69.0 ± 8.2 years, 75.6% male), 111 patients (84.7%) were diagnosed with CAD (≥ 50% luminal stenosis). ICS was found in 9 patients, and the prevalence in patients with CAD was 8.1%. Although no significant relationships were found between the severity of ICS and the degree of stenosis in CAD, the severity of ICS increased with advanced extent of CAD.

Conclusion: In the present Japanese cohort without scheduled surgeries, the prevalence of ICS among patients with CAD was relatively low (8.1%). The severity of ICS was significantly associated with the extent of CAD, suggesting the possibility that the extent of CAD could serve as a predictor of ICS among CAD patients.

Key words: carotid artery stenosis; coronary artery disease; prevalence; a single-center study; carotid ultrasonography; coronary angiography; severity; degree of stenosis; extent of disease

d-2 Cerebral aneurysmal walls contain myoglobin that is possibly produced by myofibroblasts and contributes to aneurysm wall thickening

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Background: Cerebral aneurysms are associated with subarachnoid hemorrhages if ruptured; however, mechanisms underlying aneurysmal wall thinning and thickening remain unclear. We previously confirmed the expression of myoglobin in cerebral aneurysmal walls. Myoglobin acts as a scavenger of nitric oxide (NO), which degrades the aneurysmal wall. We aimed to investigate the origin and role of myoglobin.

Methods: Cerebral aneurysmal wall samples were collected between August 2020 and March 2022 for immunohistological investigation of smooth muscle cells, myoglobin, and inducible nitric oxide synthase (iNOS) expression. We examined the co-localization of myoglobin expression within smooth muscle cells, identified by α-smooth muscle actin (α-SMA) staining, and myofibroblasts, identified by periostin staining. Furthermore, we measured collagen and myoglobin density in the same samples and investigated its correlation.

Results: In 19 formalin-fixed aneurysmal wall samples, 14 expressed myoglobin. Myoglobin was scattered or clustered within the vascular smooth muscle layer and tended to be expressed at sites other than where iNOS was identified. Double-label immunofluorescence staining confirmed that the myoglobin-positive rate within α-SMA-positive cells and α-SMA-positive areas was 33.2 ± 23.8% and 31.3 ± 37.8%, respectively, whereas that within periostin-positive cells and periostin-positive areas it was 92.2 ± 13.7% and 79.8 ± 29.5, respectively. A moderate correlation was observed between the density of myoglobin and collagen in the same sample field, with a Spearman's rank correlation coefficient of 0.593 ($p = 0.036$).

Conclusions: Cerebral aneurysmal walls express myoglobin, which may be produced by myofibroblasts in the wall. Areas with high myoglobin levels retain high levels of collagen fibers, and myoglobin may be involved in wall thickening by suppressing destructive changes in the wall.

Key words: cerebral aneurysm, rupture, mechanism, myoglobin

通訳に役立つ英語・日本語
nitric oxide：一酸化窒 ; iNOS：誘導型一酸化窒素合成酵素 ; co-localization 共局在 (サンプル内の２つの対象に対し別々の蛍光プローブを用いて染色し、オーバーラップ率を算出するもの。今回は α-SMA-positive 細胞及び領域に myoglobin がオーバーラップする率と periostin -positive 細胞及び領域に myoglobin がオーバーラップする率を検討している)；vascular smooth muscle 血管平滑筋 ; myofibroblastsc 筋線維芽細胞；collagen fibers コラーゲン繊維 (動脈瘤壁の細胞外マトリックスを構成する主な構成要素)；correlation coefficient 相関係数

d-3 Preoperative rehearsal sketch by young neurosurgeon and anatomical knowledge are effective for safe and accurate clipping for the middle cerebral artery aneurysm

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Objective: Clipping surgeries for cerebral aneurysms have been decreasing recently, owing to the development of endovascular treatment (EVT). However, the middle cerebral artery (MCA) aneurysm is often treated by clipping due to its easiness of approach and difficulty of EVT. Nowadays, we are required to acquire its surgical skill in limited cases.

Materials and methods: We reviewed articles of preoperative simulation for cerebral aneurysm clipping and the patterns of lenticulostriate artery (LSA) branching and running, and considered their influence on the safe and accurate MCA aneurysm clipping.

Results: Among the cases simulated with preoperative rehearsal sketches, the perforator infarctions were significantly less than the other cases (6.3% vs. 38.5%, p=0.03). In addition, the LSA branching and running have been roughly reported its pattern, but rarely reported their frequency and minor variations.

Conclusion: Preoperative rehearsal sketch is effective for the safe and accurate clip placement in avoidance of perforators injury. However, perforators are often impossible to be detected in preoperative images, such as computed tomographic angiography and digital subtraction angiography, depending on their resolution. Even if the LSA is not detected preoperatively, presumption of its existence is important. Therefore, good comprehension of anatomical knowledge about the pattern of LSA branching and running is also effective for avoidance of perforator injuries. Thus, we are planning to conduct a study on the LSA branching and running using cadaver dissection (Y-NEXT B200400011).

Key words: Cerebral aneurysm, Clipping, Middle cerebral artery, Lenticulostriate artery
Preoperative rehearsal sketch
脳動脈瘤, クリッピング術, 中大脳動脈, レンズ核線条体動脈, 術前予行スケッチ

d-4 Endoscopic hematoma removal may reduce the mortality rate and improve the outcome for patients with thalamic hemorrhage combined with intraventricular hemorrhage

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Background and Purpose: Ventricular perforation is a known adverse prognostic factor for thalamic hemorrhage patients. However, the therapeutic effects of endoscopic intraventricular hemorrhage (IVH) removal are not fully understood. This study aimed to investigate the therapeutic efficacy of endoscopic hematoma removal in patients with thalamic hemorrhage combined with IVH.

Materials and Methods: Between April 2014 and March 2022, patients with thalamic hemorrhage combined with IVH, who underwent surgical treatment at our hospital were retrospectively reviewed and divided into two groups: those treated with endoscopic hematoma removal with external ventricular drainage (EVD) and those with EVD alone. In both groups, pre-and postoperative ventricular hematoma volumes were evaluated with modified Graeb scale (mGS) and intraventricular hemorrhage score (IVHS). Treatment efficacy was compared using the modified Rankin scale (mRS), the percentage of the patient who needed shunt surgery, and EVD duration.

Results: There was no significant difference in mRS at discharge and shunt dependency between the endoscopic hematoma removal and EVD alone groups. However, a reduction in EVD duration was observed in the endoscopic group, which also had a higher hematoma removal volume. In addition, the endoscopic group showed a correlation between postoperative mGS and mortality rate, but not with IVHS.

Conclusions: Reduction of residual hematoma through an endoscopic approach decreased the mortality rate compared to EVD alone, indicating the potential benefits of this approach.

d-5 Post-operative symptomatic cerebral vasospasm: Requiring attention following an uneventful resection of an epidermoid cyst

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Introduction: Cerebral vasospasm associated with an epidermoid cyst is caused by tumor content spillage, including spontaneous rupture and post-surgical resection. The pathogenesis is presumed to involve free radicals produced from lipid peroxides within the tumor. Symptomatic cerebral vasospasm following the resection of an intracranial epidermoid cyst is a rare but serious complication that lacks a consensus on treatment. Previously, only three cases of post-surgical vasospasm in adults have been reported. Here, we present the first pediatric case of severe symptomatic cerebral vasospasm following the resection of an epidermoid cyst.

Case Description: A 10-year-old girl underwent an uneventful complete resection of a left cerebellopontine angle epidermoid cyst via a subtemporal transtentorial approach.
On the first postoperative day (POD 1), she developed a fever without signs of meningeal irritation. On POD 2, she exhibited reduced speech, confusion, and hyperventilation. On POD 4, she developed right hemiparesis and motor aphasia. Cerebral magnetic resonance images revealed restricted diffusion areas in her left temporal and parietal lobes, as well as the dorsal thalamus. Magnetic resonance angiograms confirmed narrowing of the proximal middle cerebral arteries, consistent with vasospasm. Conservative management, consisting of intravenous hydration and corticosteroid administration, proved effective in resolving her symptoms and radiologic vasospasm. The extensive restricted diffusion areas notably decreased in size on POD 8, and her symptoms have nearly completely resolved.

Conclusion: The combination of tumor content spillage and hyperventilation may attribute to the occurrence of cerebral vasospasm and subsequent ischemia. This complication should be acknowledged even after an uneventful operation.

Key words: Symptomatic cerebral vasospasm **症候性脳血管攣縮**, Epidermoid cyst **類表皮嚢胞**, Lipid peroxides **過酸化脂質**, Hyperventilation **過換気症候群**, Corticosteroid **副腎皮質ステロイド**

e-1 Vascularized craniotomy can be useful in the surgery of depressed skull fractures with open wound

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Introduction: Cranial depression fractures often require surgical repair, especially in the case of open fractures, which must be performed more carefully because of the high risk of infection due to the free bone fragments. In this report, we describe a case in which good wound healing was achieved by performing vascularized craniotomy while preserving blood flow from the temporal muscle fascia to the bone fragments and report on the usefulness of this technique with some literature reviews.

Case: A 54-year-old man had suffered a head injury in a single motorcycle accident. His consciousness level was GCS 8 (E1V2M5), but there was no apparent motor deficit. There was an open wound at the left parietotemporal area and a head CT scan showed depressed skull fractures with an internal displacement of the medial table measuring 18 mm. The possibility of dural defect and infection from the open wound were concerned, so emergency surgery was planned. Preoperative imaging also showed that the depressed fractures were near the linear temporalis. Therefore, instead of the free flap craniotomy, we performed the osteoplastic flap craniotomy, in which the temporal muscle was not dissected from the bone. Specifically, cutting the base of the open flap from inside out with a wire saw (*senkyo*), allowing the musculo-periosteum and surrounding muscle to remain attached to the bone flap. Postoperative wound healing was good, and no acute-phase infectious complications were noted. He was discharged 19 days after the injury with mild motor aphasia and clumsiness of right hand.

Conclusion: Free skull bone flap has a risk of infection at the emergency surgery for open injury, subdural empyema and so on. Vascularized craniotomy is one of the useful surgical techniques for such cases vulnerable to infection.

Key words: craniocerebral trauma, infection, cranial depression fractures, open fractures, vascularized craniotomy, free flap craniotomy, osteoplastic flap craniotomy, a wire saw (a Gigli saw, *senkyo*, 線鋸)

e-2 Visualizing improvements in cognitive function with non-pharmacological therapy using magnetoencephalography (MEG) – Case report

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Objective: Once diagnosed with dementia, it is thought to only progress and not improve. Meanwhile, several reports proved that non-pharmacological therapy is effective to improve cognitive function even after the onset. With our trial, MEG feature values may be able to assess and visualize cognitive change.

Materials and Methods: In our memory clinic at Kumagaya General Hospital, we use Magnetic Resonance Imaging (MRI), Single Photon Emission Computed Tomography (SPECT), and neuropsychiatric batteries for diagnosis. MEG is performed as electrophysiological evaluation. We provided non-pharmacological treatment patients with mild cognitive impairment (MCI) and evaluated.
Using spectral analysis of MEG, we use three feature values as follows. Individual Alpha Frequency (IAF) is associated with memory and temporal function. Shannon's Entropy (SE) is related to executive and frontal function. Median Frequency (MF) relates to global cognitive function.
Non-pharmacological therapy includes the following three methods; physical activity, regulating autonomic rhythm, and social exercise.

Results: We present two cases. One was diagnosed with MCI due to Alzheimer's disease (AD) and IAF was declined in MEG. Another case was MCI due to frontotemporal dementia (FTD) with declined MF and SE.
After 12 months, both cases showed cognitive improvement, and MEG feature values correlated the change.

Conclusion: This result indicates that non-pharmacological therapy is effective for not only Alzheimer's pathology but also other types. MEG plays the row visualizing the cognitive change. By visualizing improvement of cognitive function, both patient and their caregiver are able to stay in better condition and stay positive.

Key words: magnetoencephalography 脳磁図 , non-pharmacological therapy 非薬物療法 , mild cognitive impairment 軽度認知障害 , Alzheimer's disease アルツハイマー病 , frontotemporal dementia 前頭側頭葉型認知症 , feature value 特徴量 , Individual Alpha Frequency (IAF) 個別アルファ周波数 , Shannon's Entropy (SE) シャノンエントロピー , Median Frequency (MF) 中央周波数

e-3 Interictal high gamma oscillation regularity analysis and MRI susceptibility weighted imaging or MRI T2* imaging on recurrent alcohol related seizures; implications for alcohol use disorder

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Background: Alcohol-related seizures (ARS) occur after the cessation of alcohol intake. Some patients with ARS experience recurrent seizures that are challenging to differentiate from other forms of epilepsy due to the absence of clear consensus on biomedical or electrophysiological markers.

Methods: We analyzed three patients with a history of alcohol abuse and recurrent seizures between 2018 and 2021. Interictal high gamma oscillation regularity analysis (GOR) was conducted to investigate the epilepsy focus. Additionally, susceptibility weighted imaging (SWI) and MRI T2* imaging (T2*) were performed to detect hemosiderin deposits.

Results: All three patients exhibited a high GOR focus. SWI or T2* imaging revealed lesions with hemosiderin deposits in all patients, corresponding to the GOR focus. Two patients underwent craniotomy for lesion resection and received oral antiepileptic drugs (AED). The remaining patient was treated with AED but experienced a left cerebral hemorrhage after six months.

Conclusion: The combination of GOR analysis and SWI or T2* imaging may be useful in the identification of patients with recurrent ARS who may have treatable epileptogenic lesions through AED or epilepsy surgery.

Keywords: Interictal high gamma oscillation regularity, susceptibility weighted imaging, alcohol-related seizures, epilepsy surgery

e-4 Administration of Tranexamic Acid After Burr Hole Craniotomy Reduced Postoperative Recurrence of Chronic Subdural Hematoma in a Japanese Regional Population

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School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan.[3]

Background: Although tranexamic acid (TXA) has occasionally been used to prevent postoperative recurrence of chronic subdural hematoma (CSDH) after burr hole craniotomy (BC), robust evidence of its efficacy has been lacking.

Objective: To assess the efficacy and safety of postoperative oral administration of TXA after BC for CSDH among the elderly.

Methods: This retrospective, propensity score-matched cohort study was carried out with a large Japanese local population-based longitudinal cohort in the Shizuoka Kokuho Database between April 2012 and September 2020. Patients included were age 60 years or older and had undergone BC for CSDH but were not undergoing dialysis. Covariates were collected from records of the preceding 12 months from the month of first BC, and patients were followed up for 6 months after surgery. The primary outcome was repeat surgery, and the secondary outcome was death or the onset of thrombosis. Data on postoperative TXA administration were collected and compared with controls using propensity score matching.

Results: Of the 8544 patients who underwent BC for CSDH, 6647 were included, with 473 placed in the TXA group and 6174 placed in the control group. After 1:1 matching, repeated BC was found to have been performed in 30 of 465 patients (6.5%) in the TXA group and in 78 of 465 patients (16.8%) in the control group (relative risk, 0.38; 95% CI, 0.26-0.56). No significant difference was observed for death or the onset of thrombosis.

Conclusion: Oral administration of TXA reduced the occurrence of repeat surgery after BC for CSDH.

Key words: Chronic subdural hematoma, Craniotomy, Subdural hematoma, Tranexamic acid, Recurrence

e-5 Intraorbital abscess due to inserted bamboo fragment diagnosed by MR imaging and treated with pterional craniotomy: findings of bamboo vary depending on the phase and the moisture content

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Introduction: Penetrating intraorbital injuries of foreign bodies cause various symptoms and complications, and it might be difficult to diagnose especially small foreign body. We report a case of intraorbital abscess due to inserted bamboo fragment via small wound.

Case descriptions: An 82-year-old man felt a sharp right supraorbital pain while handling with bamboo. As the pain was transient, he did not consult to any medical doctors. Ten days after the injury, he visited our hospital complaining of right eye pain and redness of the conjunctiva. Plain computed tomography (CT) showed a hyperdense lesion in the right retroocular space and some air-like spots. We performed magnetic resonance imaging (MRI) examinations and T1-weighted imaging (T1WI) showed the low intensity tissue surrounding the linear foreign body showing lower intensity. The foreign body was a well delineated stick-shape object. Considering the image findings and his medical history, we made a diagnosis as intraorbital abscess due to an inserted bamboo fragment. After performing pterional craniotomy, we removed orbital rim, opened periorbita and approached into the retroocular space. We found abscess, in which we removed a small fragment of bamboo. Postoperative CT and MRI showed the abscess disappeared. The impairment of the right eye movement alleviated in 3 months.

Discussion and Conclusion: We examined difference between MRI findings of wet bamboo pieces and dry ones. As a result, wet ones showed high intensity, on the other hand, dry ones showed low intensity. When a small foreign body penetrates the orbit without passing through conjunctiva, patients are sometimes asymptomatic and unable to notice it at the acute phase, and X-ray examination cannot detect it. Therefore, sometimes abscess can form. We must notice of difficulty of imaging diagnosis of penetrated bamboo pieces.

Key words: penetrating intraorbital injury, intraorbital foreign body, intraorbital abscess, bamboo, pterional craniotomy.

e-6 The analysis of cerebrospinal flow dynamics in mouse fetuses - Cerebrospinal fluid may flow out from the brain through the frontal skull base and choroid plexus -

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Objectives: Cerebrospinal fluid (CSF) has been believed to be produced in choroid plexus, and drain into sagittal sinus through arachnoid granules in one-way. This theory can explain most pathological conditions. Recently, new CSF drainage tracts were proposed such as brain capillaries, meningeal and nasal lymphatic system. In this study, we investigated the extracranial outflow of particles in CSF. This analysis will contribute for the prevention of brain aging, cerebral degenerative diseases and hydrocephalus.

Materials and Methods: Mouse fetuses at a gestational age of 13 days were used. Either Fluorescent proves with differing molecular weights (MW) or gold particles with different size or fluorescent labeled cadaverine were injected into the lateral ventricle. The probes movements were monitored in live. Gold particles deposition was studied under stereomicroscope or electron microscope (EM). Cadaverine deposition, indicates its movements tract, were observed under fluorescent microscope.

Results: 1) Fluorescent study: With an injection of low and high molecular weight (LMW, HMW) probes conjugate, both probes dispersed into the brain, but only the LMW probe dispersed into the whole body. The gate size to go out from brain is suspected as less than 1400. 2) Gold particle study: The gold particles accumulated at the frontal skull base. EM study revealed gold particles deposition between the ependymal cells. And only small size particle (2 nm) was found in liver. 3) Cadaverine study: Its deposition was observed on the frontal skull base, choroid plexus, ependyma and peri-vascular space.

Conclusion: The particles in CSF may drain to extracranial space via frontal skull base and choroid plexus through ependyma and peri-vascular space. This particles outflow is regulated by its MW and size.

Key words: cerebrospinal fluid, outflow, channel, gate, live image, mouse, fetus, fluorescein, gold particle

日本脳神経外科国際学会フォーラム　会則

第１章　総則

第１条　本会は、日本脳神経外科国際学会フォーラム（Japan Neurosurgery English Forum、略称 JNEF）とする

第２条　本会の事務局を、岡山大学医学部脳神経外科学教室に置く。事務局は、会員名簿・会費を管理し、会の運営に必要な事務手続きを行う。

第３条　事務局の移転・変更に関しては、事務局代表からの申し出、あるいは事務局代表が65歳となった時点で、運営委員による新事務局代表の推薦を募り、運営委員会で決定する。

第２章　目的及び事業

第４条　本会は、診断・治療・研究に関して世界的水準を維持し、国際的にも活躍できる脳神経外科医育成を目的とする。

第５条　本会は、研究発表を通じ、英語論文執筆・発表力・同時通訳等の医学英語レベル向上を目指す。

第６条　本会は、前条の目的を達するため、次の事業を行う。

１．学術集会の開催
　　原則として毎年１回
２．運営委員会の開催
３．学会ホームページの運営
４．その他の目的達成に必要な事項　等

第３章　会員

第７条　本会の目的に賛同し、且つその達成に協力する脳神経外科医及び神経科学に従事する科学者をもって構成する。

第８条　本会に入会を希望する者は、所定の用紙に必要事項を記入し、事務局に申し込むものとする。

第９条　学術集会における発表および参加は、会員ならびに会長が認めた者に限る。

第10条　会員から、年会費を徴収し、事務局でそれを管理・運営する。

第４章　役員

第11条　本会は次の役員を置く。
　　名誉会員　会長　運営委員

第12条　本会の会長は、運営委員会において運営委員より１名選出する。会長は、当該年度の学術集会を主催する。その任期は、当該事業年度とする。

第13条　本会の運営委員で65歳になったものを運営委員会の議を経て名誉会員とする。名誉会員は年会費・参会費を免除する。

第14条　新運営委員の選出にあたっては、現運営委員２名が推薦状を付けて事務局に推薦し、運営委員会で決定する。運営委員の年齢は65歳未満とする。

第５章　会議

第15条　運営委員会は、毎年１回学術集会の期間中に開催し、２分の１（委任状を含む）以上の出席をもって成立する。運営委員会の議決は出席会員（委任状を含む）の過半数をもって決する。

第６章　会計

第16条　本会の事業年度は、毎年１月１日より12月31日までとする。

第17条　本会の運営は、学術集会会費、協賛金、年会費、その他をもってあてる。

第18条　本会の事務局経費の監査は、運営委員の中から運営委員会において選出する。

第19条　学術集会の会計は、会長在任の期間において会長が会計責任者を兼務し、次年度の運営委員会においてその会計報告を行う。

第20条　学術集会の会計監査は、前回会長が行う。

第７章　会則

第21条　本会則ならびに細則は、運営委員会において改正することができる。

細則

１．年会費は、2,000円とする。

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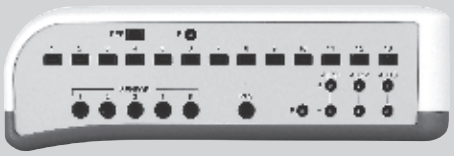

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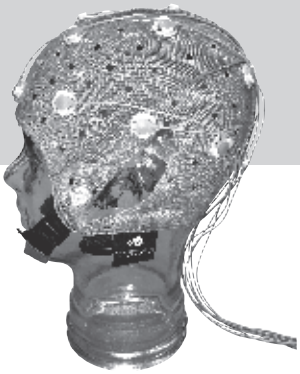

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