

脳梗塞と 心房細動

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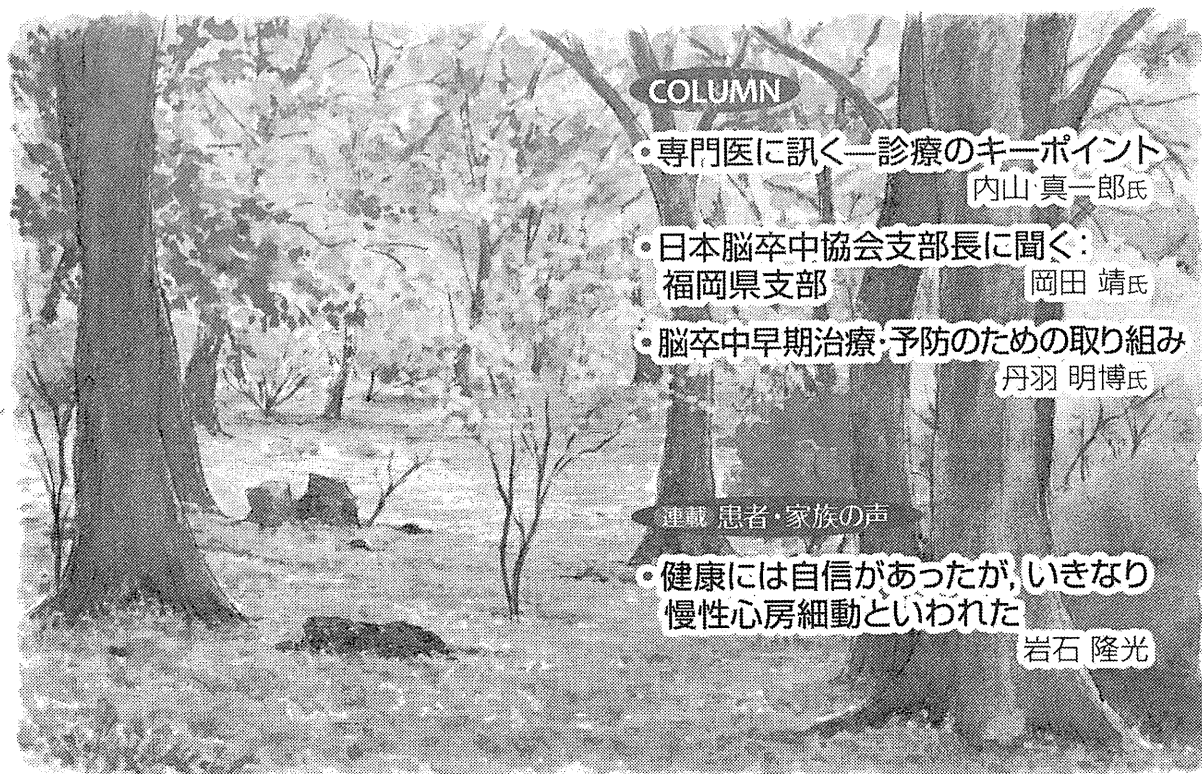
2014 Vol.1 No.2

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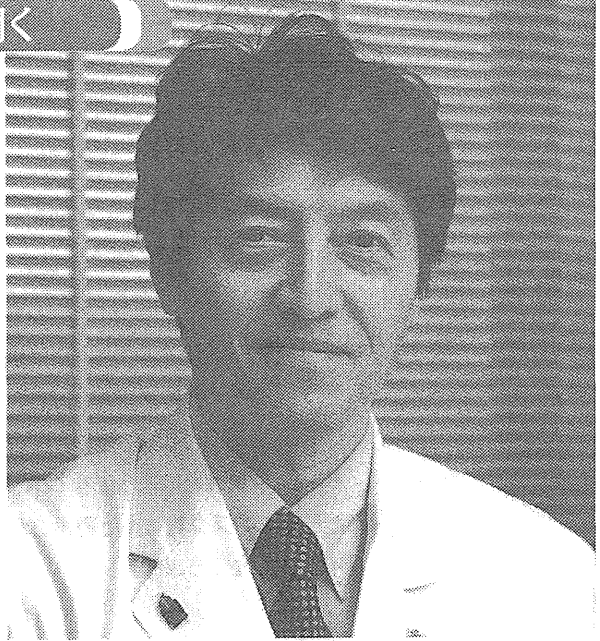


公益社団法人
日本脳卒中協会
The Japan Stroke Association

日本脳卒中協会 福岡県支部の 活動について

岡田 靖氏

国立病院機構九州医療センター臨床研究センター長
日本脳卒中協会福岡県支部長



▶ 沿革と主な活動

人口150万人超の大都市福岡市は、救急車の現場到着所要時間は全国最速レベルの6分台（全国平均8.3分）、地域連携パスに参加している病院は福岡市医療圏で11カ所、回復期施設は33カ所あり、国内屈指の医療体制が整備されている。国立病院機構九州医療センター臨床研究センター長の岡田 靖氏が支部長を務める日本脳卒中協会福岡県支部は、県民にわかりやすく受け入れられやすい啓発活動を通して脳卒中予防に取り組んでいる。

福岡県支部は日本脳卒中協会が全国に支部開設を始めた早い時期、2003年に立ち上げられた。県内には北九州市支部もあり連携をとっている。事務局は九州医療センター内の臨床研究センターに置かれ、会員は脳卒中既往者、家族、医療従事者、ケアマネジャーなどで構成。主な活動は脳卒中に関する市民への知識の普及、啓発と医療相談である。

毎年、脳卒中週間（5月25日～31日）にあわせて、九州医療センターの脳血管センター内の3つの診療科（脳神経外科、脳血

管内治療科、脳血管・神経内科）と九州大学病院病態機能内科学（第二内科）脳循環研究室が協力して市民公開講座を開いている（図）。会場では講演のほか、血圧脈拍

市民公開セミナー

脳こうそくの早期発見・予防の大切さ

2014年 5月25日(日) エルガーラフF 中ホール他
13:00～17:00(12:30開場) 福岡市中央区天神1-4-2 TEL:092-711-6017

第1部 13:00～14:20
 ●「抗血栓薬の作用と脳卒中、心臓病の治療」
 ●「血管内治療の進歩と脳の動脈硬化」
 ●「患者さんインタビュー」
 「とくに高コレステロールや喫煙習慣を修正したアテローム血栓性動脈硬化の患者さん」

第2部 14:45～16:00
 ●「腎臓、コレステロールと脳血管障害」
 ●「動脈硬化が強い方の脳卒中予防のポイント」
 ●「脳卒中協会 今年の目標と最近の動向」

体験コーナー 16:00～

●脳動脈造影検査
●脳CT検査
●脳MRI検査
●脳ドック
●脳血管造影検査
●脳神経検査
●脳神経外科
●脳神経内科

参加費 無料
 申込先 日本脳卒中協会福岡県支部、アストリタ株式会社
 申込先 日本脳卒中協会福岡県支部、アストリタ株式会社
 申込先 日本脳卒中協会福岡県支部、アストリタ株式会社

図 市民公開講座ポスター

測定・頸動脈超音波体験コーナーを設置し、参加者はプラークの状態や動脈硬化の状態を調べることができる。

▶資料は手作り、 福岡県支部オリジナル

啓発のための資料は一般住民にとってわかりやすいものを作り。福岡市消防局と共同で作成した冊子「福岡から脳卒中ゼロをめざして STROKE ZERO 一急がないかん、脳卒中なら救急たい！」は、博多弁の標語調で目を引く。読みやすい漫画を用いて発作時の症状、救急隊による病院搬送までが説明されている。「日頃、診察の中で患者さんに理解していただいていることを、どのようにしたら一般市民に要領よく伝えられるかを考えました」（岡田氏）。医局員と検討し、リスクの内容を方言や言葉のリズムにのせて覚えてもらう手法を思いついた。「おかしかねえ、ろれつが回らん、腕あがらん、なあんか顔のよがんどお、そら脳卒中ばい、救急たい！」はまさにFukuoka Prehospital Stroke Scale (FPSS) だ。「福岡県支部 脳卒中予防十か条」(表)では、日常生活上のリスクをユニークな標語形式

にまとめている。この冊子は福岡市消防局が中心となってすでに8万部以上が福岡市内で配布され、支部webサイトからダウンロードも可能だ。冊子の配布後、顔がゆがんだり腕に力が入らなくて下がったりすると、軽症でもすぐ受診する市民が増え、脳卒中予防のための成果が出ている。

また、福岡県支部と福岡県看護協会が共同で作成したパンフレット「脳卒中を予防するための10か条と大切なお話」は、市民向けに生活習慣やリスクの管理についてわかりやすく説明したもので、最新のガイドラインの内容も盛り込んで編集されている。これも看護協会を通じて積極的に配布している。

「先生、私、お酒(焼酎)は飲んでいますが、薄めているから3杯は大丈夫ですよね」、「健康食品を食べすぎて肥満」など間違った知識も多いことから、これらの逸話を講座などで紹介して正しい知識に塗り替え、生活習慣のリスクを伝える。このように、住民への啓発を地域に受け入れられやすい形で進める福岡県支部。「わかりやすい言葉で脳卒中の恐ろしさと予防の大切さを啓発しています。住民のみなさんにはぜひ、

表 ● 福岡県支部 脳卒中予防十か条

<ul style="list-style-type: none"> ＊気をつけよう！40代から高血圧 ＊風邪とは違う糖尿病、食事療法続けよう ＊トトン、トトン(不整脈) 続けば心臓見直そう ＊やめようタバコ、脳は酸欠、血管痛む ＊百薬の長といえども1合まで(アルコール)、脳出血は飲み過ぎから ＊食べ過ぎだあ ヘルシーフードで太り過ぎ メタボ予防は腹八分から！ ＊足腰を、動かす(運動) 心が、発作を防ぐ ＊ストレスと、過労・脱水、引き金(誘因)に ＊お薬は、勝手にやめず、相談を ＊脳卒中、顔・腕・言葉で、救急車
--

日本脳卒中協会福岡県支部に入会していた
だきたいですね」(岡田氏)。

▶ 医師やメディカルスタッフの 勉強会も

医師やメディカルスタッフの勉強会も充
実している。特徴的なのは、患者さんの急
性期から回復期をリレー式にみる“リレー
症例検討会”。市内30カ所以上の病院から

年1回、医師とメディカルスタッフが総勢
150人参加する。“リレー”の真意は、職種
ごとの関係でなく「連携」。自分の担当す
る仕事をある一時期だけ行い「次につない
で終わり」ではなく、「最終目標(健康寿
命の延伸、生活の質の回復・維持、脳心血
管イベントの予防)まで一緒にスクラムを
組んでみんなで患者さんを見守り続けるこ
と」(岡田氏)を心がけている。

● 岡田 靖 (おかだ やすし)

- 1982年九州大学医学部卒業、国立循環器病センター脳血管部門、米国スクリプス研究所客員研究員等を経て、1994年国立病院機構九州医療センター脳血管・神経内科医長、2010年より同臨床研究センター長(現職)。
- 家族と過ごす時間を大切に。出張先での旧友との再会は楽しみの一つ。座右の銘は「人事を尽くす」「世のため人のため」。
- 若手スタッフに「6つのシジョン」の大切さを教えている。「脳血管治療スピリット」; mission (救う使命感), passion (困難を乗り越える情熱), high tension (時間と戦う緊迫感)。「エネルギー充電」; attraction (明るく楽しい医局行事), vacation (休養・睡眠), communication (チームの和)。
- 心がける仕事の流儀は、誠実、丁寧、配慮、精進と常備。医療連携では相手への気配りを大切にし「乾いたメールを送らない」。

日本脳卒中協会と企業との心房細動に関連する共同事業

*括弧内は事業パートナー

医療従事者向け

● 心房細動患者における脳梗塞予防に関するかかりつけ医教育事業「Care AFプロジェクト」 (バイエル薬品株式会社)

心房細動患者における心原性脳塞栓症の一次予防および二次予防に関する講演会を全国30カ所以上で開催しています。講演で用いる教育用スライドセットの提供も行っています。

● 脳卒中予防に関するかかりつけ医教育事業 (ファイザー株式会社)

地域の啓発リーダーとなる専門医を対象とするエリアエキスパート会議や各地域のかかりつけ医を対象とする教育セミナーを開催しています。教育セミナーで用いるスライドセットの提供も行っています。

一般市民・患者向け

● 心房細動の早期発見・指導プロジェクト (バイエル薬品株式会社)

心房細動の早期発見と適切な指導による脳梗塞の予防を図るために、1) プレスセミナーや提言書による問題提起、2) モデル事業による実現可能な早期発見・受診勧奨方法の開発、3) その方法の全国への普及、を進めています。

● 心房細動患者における脳卒中予防に関する患者教育事業「心房細動患者さんの脳をまもろうプロジェクト」 (日本ベーリンガーインゲルハイム株式会社)

医療機関で掲示するポスターや待合室などで供覧する啓発動画の作成、患者用小冊子の作成、webサイト <http://www.stop-afstroke.jp/> を通じて、啓発活動を行っています。

● 脳卒中予防啓発プログラム (ファイザー株式会社)

市民公開講座の開催、Jリーグやアメリカンフットボールなどのスポーツイベントでの予防の呼びかけや、テレビ、ラジオや新聞などを通じた啓発活動を展開しています。市民講座で用いるスライドセットの提供も行っています。

Transient Ischemic Attack as a Medical Emergency

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Abstract

Since transient ischemic attack (TIA) is regarded as a medical emergency with high risk for early stroke recurrence, the underlying mechanisms should be immediately clarified to conclude a definitive diagnosis and provide early treatment. Early risk stratification using ABCD² scores can predict the risk of ischemic stroke occurring after TIA. Carotid ultrasonography (US) can evaluate the degree of stenosis, plaque properties and flow velocity of ICA lesions. High-risk mobile plaques can be classified by carotid US, and aortogenic sources of emboli can be detected by transesophageal echocardiography. Cardiac monitoring and blood findings are thought to play a key role in a diagnosis of cardioembolic TIA. Diffusion-weighted imaging (DWI)-MRI and MR angiography are also indispensable to understand the mechanism of TIA and cerebral circulation. To prevent subsequent stroke arising from TIA, antiplatelet and anticoagulant therapies should be started immediately along with comprehensive management of life-style, hypertension, diabetes mellitus, dyslipidemia and other atherosclerotic diseases. Carotid endarterectomy and endovascular intervention are critical for treating symptomatic patients with significant stenosis of ICA. A novel concept of acute cerebrovascular syndrome (ACVS) has recently been advocated to increase awareness of TIA among citizens, patients and medical professionals. TIA should be recognized as the last opportunity to avoid irreversible ischemic stroke and its sequelae. The clinical relevance of the new concept of ACVS is advocated by early recurrence after TIA, analysis of high-risk TIA, treatment strategies and the optimal management of TIA. Raising TIA awareness should also proceed across many population sectors.

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Urgency: Short-Term Risk of Transient Ischemic Attack

Patients with transient ischemic attacks (TIAs) are at high risk of early stroke. Large cohort and population-based studies over the past decade have demonstrated a higher risk of early stroke after TIA than had been suspected. In general, 15–20% of patients have a stroke within 3 months of a TIA [1], with half of those occurring within

48 h [2]. Several recent guidelines recommend that patients with TIA should be thoroughly assessed within 24 h. In a prospective, population-based observation with complete follow-up (Oxford Vascular Study) of 1,247 patients with a first TIA or stroke, 35 had recurrent stroke in the same arterial territory within 24 h. The 6-, 12-, and 24-hour stroke risks after 488 first TIAs are 1.2, 2.1 and 5.1%, respectively, and 42% of all recurrent strokes during the 30 days after a first TIA occur within the first 24 h [3]. The 12- and 24-hour risk area is closely associated with ABCD² scores. Recurrent strokes within the first 24 h of a TIA highlight the need for emergency assessment. The ABCD² score is a reliable clinical indicator during the acute phase to assess appropriate triage, emergency management and feasible treatment. However, most patients with TIA do not receive optimal treatment even today; statins are not administered, and blood pressure is not controlled. Many patients are prescribed with aspirin and sent home directly from an emergency room without additional evaluation. Yet risk is particularly high during the first few days after TIA. Studies in northern California (USA) and Oxfordshire (UK) found an approximate 4% risk of stroke within the first 24 h of a TIA, which is about twice the risk of myocardial infarction or death in patients presenting with acute coronary syndrome (about 2% at 24 h). The northern California study followed up 1,707 patients for 3 months after a first visit to an emergency room where they were diagnosed with TIA. The results showed an unexpectedly high (10.5%) overall incidence of stroke during the 3-month period, and half of these developed within 48 h after the onset of TIA [4]. Recurrent ischemic stroke occurred in 8 (5%) of 160 consecutive patients with DWI-negative TIA during hospitalization at Kyushu Medical Center [5]. All of these occurred within 7 days with a median of 2.5 days. Unlike the German Stroke Bank study [6], a lacunar etiology was the most frequent, and modified Rankin Scale outcomes were mostly good at discharge (fig. 1a). The incidence of recurrent stroke closely correlates with ABCD² score. The prevalence of both atrial fibrillation (AF) and occlusive arterial disease is also significantly higher in patients with, than without recurrent stroke. An atherothrombotic etiology is more likely in the unclassified type (AF and/or middle cerebral artery), since PT-INR in these types remains within the optimal range (fig. 1b). These results are particularly characteristic in Japan, compared with USA-European findings. Even under immediate best medical management, patients with high ABCD² scores tended to develop recurrent stroke. A combination of AF and occlusive arterial disease might indicate high risk for early recurrence of ischemic stroke in patients with TIA.

Effect of Emergency Care

The EXPRESS (Early use of EXisting PREventive Strategies for Stroke) study [7] in Oxford (UK) was designed to compare the outcomes of treatment before and after switching to emergency care in which each patient is evaluated more actively and urgently at a TIA clinic and treatment with proven methods is started within 24 h when

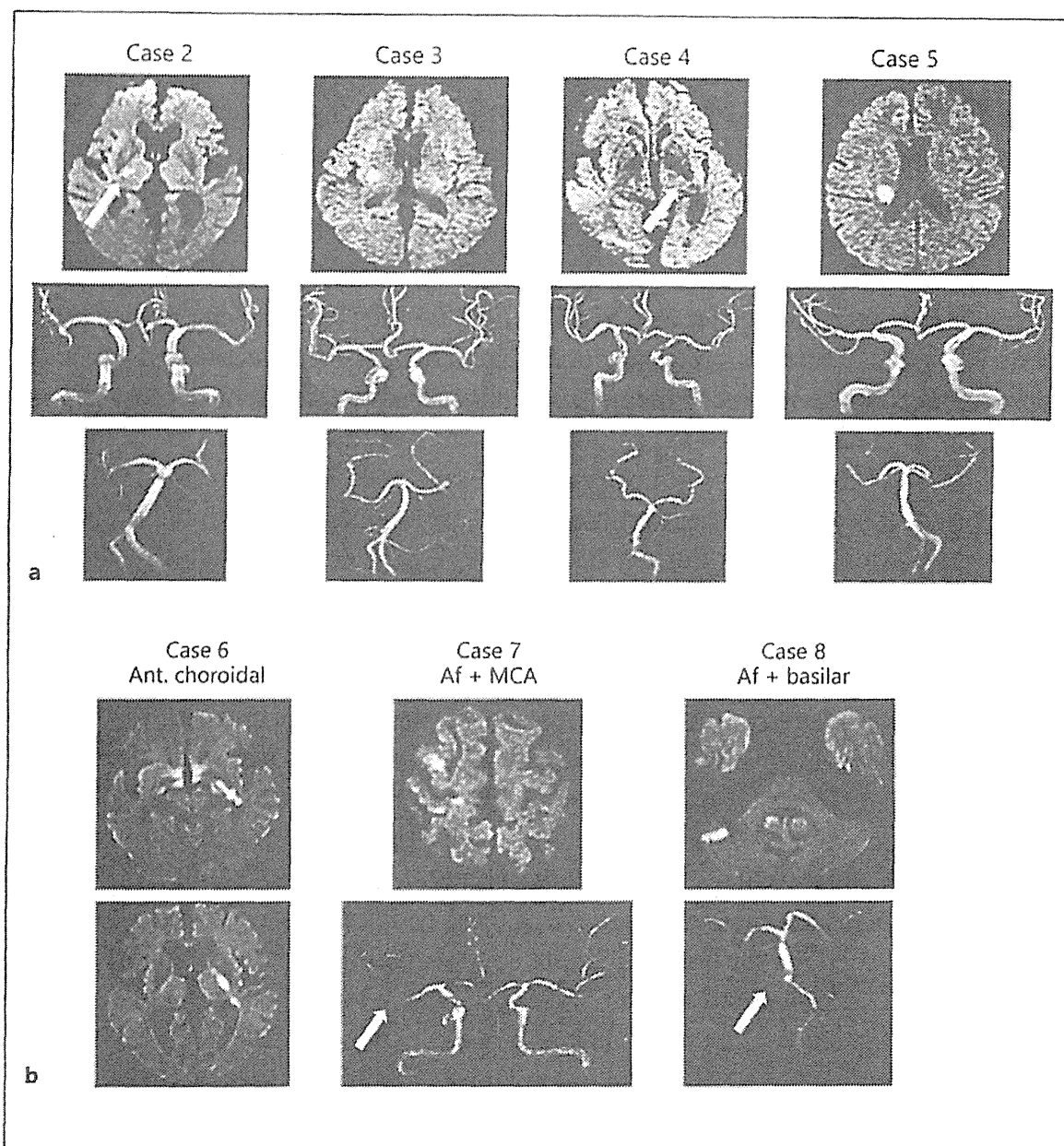
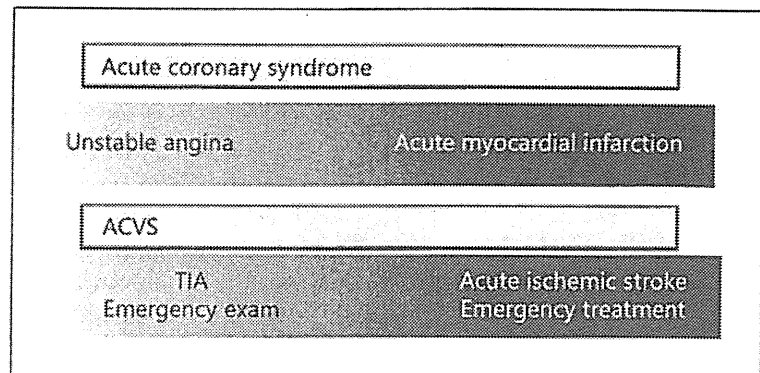


Fig. 1. Recurrent brain infarction in patients with DWI-negative TIA of unclassified and lacunar etiology. Four patients with lacunar TIA (a) and 3 with unclassified TIA accompanied by AF and intracranial artery disease (b). Modified from Mori et al. [27].

possible. The findings showed that early treatment positively affected socioeconomic outcomes, length of hospital stay and reduced the incidence of ischemic stroke and improved activities of daily living (ADL) at 90 days [7, 8]. Although these were observational studies and the influence from confounding factors could not be ruled out, the stroke risk after onset of TIA or minor ischemic stroke decreased by 80% compared with risk recorded before starting emergency care. Lavallée et al. [9] also evaluated the effects of rapidly assessing patients with TIA at a TIA clinic on clinical decision-making, the length of hospital stay and subsequent stroke rates. Patients were

Fig. 2. Treatment on same spectrum as acute ischemic attack. Awareness of TIA as ACVS that requires emergency examination and treatment, like acute coronary syndrome.



assessed within 4 h of admission by means that included neurological, arterial and cardiac imaging. Among 1,085 patients admitted with suspected TIA, 574 (53%) attended the TIA clinic within 24 h of symptom onset, 701 (65%) had confirmed TIA or minor stroke, and 144 (13%) had possible TIA. Of the patients with confirmed or possible TIA, all started a stroke prevention program, 43 (5%) had urgent carotid revascularization, and 44 (5%) were treated for AF with anticoagulants. After assessment, 808 (74%) of the patients seen were sent home on the same day. The 90-day stroke rate was 1.24% (95% CI: 0.72–2.12), whereas the rate predicted from ABCD² scores was 5.96%. This 80% stroke reduction was exactly the same as the EXPRESS results, that is, risk predicted based on ABCD² scores. Use of TIA clinics with 24-hour access and the immediate initiation of preventive treatment might greatly reduce length of hospital stay and risk of stroke compared with predicted risk. Thus, this type of emergency TIA clinic is very effective in preventing stroke. The results of the EXPRESS and SOS-TIA registry referred to the 2009 Japanese Guidelines for the Management of Stroke [10], which state, 'If TIA is suspected, the onset mechanism should be identified as soon as possible, and treatment to prevent subsequent cerebral infarction must be started immediately (Grade A)'. Since the early intensive management of TIA is rather important and awareness of TIA as a medical emergency needs to be heightened, a new concept of acute cerebrovascular syndrome (ACVS) that requires emergency examinations and treatment has been advocated along the lines of acute coronary syndrome [11] (fig. 2).

Acute cardioembolic brain infarction without prior TIA is not rare, and often results in severe and irreversible neurological deficits that are referred to as devastating or knockout brain infarction, implying a bedridden state brought about by one straight punch delivered by a cardiac embolus. About 1.6–20% of patients with cardioembolic stroke reportedly experience recurrent stroke in another vascular territory within 2 weeks [12, 13]. Therefore, if AF is detected in patients with TIA in the acute setting, anticoagulant therapy should be started as soon as possible because prior TIA is a red flag indicating a last chance to avoid severe neurological impairment.

Carotid artery stenosis is responsible for crescendo TIA and stroke. In practice, the North American Symptomatic Carotid Endarterectomy Trial (NASCET) found an

8.9 and 20.1% incidence of ipsilateral stroke during 7 and 90 days, respectively, after TIA onset in patients with carotid artery severe stenosis [14]. Bond et al. [15] reported that the prognosis of patients with TIA accompanied by carotid stenosis differs greatly depending on whether or not treatment is provided within 2 weeks of disease onset. However, the reality is that carotid endarterectomy (CEA) and stenting often proceed several weeks after onset.

Key Points of Risk Stratification at First Visit

What are the early risks of stroke and other vascular outcomes? Northern California studies found that adverse events including admission for cardiovascular events, death, and recurrent TIA occurred in 25.1% of patients studied during 3 months after the onset of a TIA. The ABCD² score was derived to provide a more standard prediction and it incorporates elements from both prior scores. In combined validation cohorts, the 2-day risk of stroke was 0% for scores of 0 or 1, 1.3% for 2 or 3, 4.1% for 4 or 5, and 8.1% for 6 or 7 in the summation of following factors: age ≥ 60 years (1), blood pressure $\geq 140/90$ mm Hg on first evaluation, clinical symptoms of focal weakness with spelling (2) or speech impairment without weakness; duration ≥ 60 min (2) or 10–59 min (1) and diabetes (1). The 2-day period after TIA onset is critical for determining whether a patient should be hospitalized or managed as an outpatient in a non-timely fashion (with some delay) [16]. On the other hand, patients with apparently low-risk TIA-like symptoms should also be evaluated for early risk after an attack. Among 907 patients presenting with dizziness, cerebrovascular conditions were the cause in 37 (4.1%), and most of them were ischemic strokes ($n = 24$). The ABCD² score predicted that an ultimate cerebrovascular event might provide useful information about dizziness in patients presenting at emergency department who are at low risk for a cerebrovascular diagnosis [17]. These findings underscore the need for the prompt evaluation and treatment of patients with symptoms of ischemia.

The presence of a new infarct on brain images, which is consistent with the classic definition of TIA but would not lead to stroke, is associated with about a 2- to 15-fold increase in the subsequent short-term risk of stroke. Evidence of vessel occlusion on acute brain MRA also has been associated with a 4-fold increased short-term risk of stroke [18, 19]. A total of 159 patients were enrolled in a study of silent new DWI lesions within the first week after a stroke [20]. Clinical stroke recurrence was detected in 2.5% of these patients. A new cerebral lesion was detected in 5.7% of patients between a first and a second imaging assessment (first interval) and in 23.3% between a second and a third imaging assessment (second interval). Multivariable analysis has independently associated new lesions with ipsilateral carotid stenosis, recanalization and a multiple lesion pattern. New lesions on DWI arise more often than routine neurological examination suggests. Stroke risk immediately after TIA defined by time-based criteria is high, and prognostic scores (ABCD² and ABCD³-I) have been devel-

Table 1. Treatment policy for TIA

Immediate hospitalization; treated as for acute brain infarct
ABCD ² score ≥ 3 points
Initial attack within 3 days
Frequent or multiple TIA
Cardioembolic TIA
Advanced carotid stenosis
Sustained symptoms
Cerebral cortical symptoms

Outpatient examinations; anti-platelet therapy
Single attack: hospital visit 1–2 weeks later

Elective hospitalization for detailed examination
Cardiogenic or main artery lesion or high risk for TIA found on outpatient basis

oped to assist management. Among patients with lesions on DWI, recurrent stroke rates at 7 days after tissue-negative and -positive events were 7.1 and 0.4%, respectively. The ABCD² score had a predictive value in tissue-positive and -negative events [20]. These findings support the concept of a tissue-based definition of TIA and stroke, at least on prognostic grounds.

Hospitalization: Transient Ischemic Attack Management Policy

Hospitalization rates after TIA vary widely among practitioners, hospitals, and regions. A study from the National Hospital Ambulatory Medical Care Survey found that 54% of patients with TIA were admitted to a hospital, with rates varying from 68% in the northwest United States of America to 41% in the west. Over 70% of patients with TIA in the acute setting are admitted to our hospital, like other specialized stroke hospitals in Japan. An ABCD² score of >3 points is currently applied to make initial decisions regarding hospital admission. A history of frequent TIAs, cardioembolic TIA, carotid stenosis of $>50\%$ on the ischemic side, typical symptoms lasting >60 min, cerebral cortical symptoms such as aphasia and hemianopsia are thought to indicate high-risk TIA that warrants admission. On the other hand, patients who present several days after TIA onset are examined and treated on an outpatient basis using antiplatelets unless a cardiogenic source or main artery lesion is detected (table 1). The recommended initial examination for TIA after taking a medical history comprises physical and neurological examinations, ECG, blood tests including CBC, biochemistry, prothrombin time/activated partial thromboplastin time, lipid and blood sugars, and MRI to detect new ischemic lesions and vascular stenosis. DWI-MRI is essential in Japan. Noninvasive examinations such as carotid ultrasound, MRA and

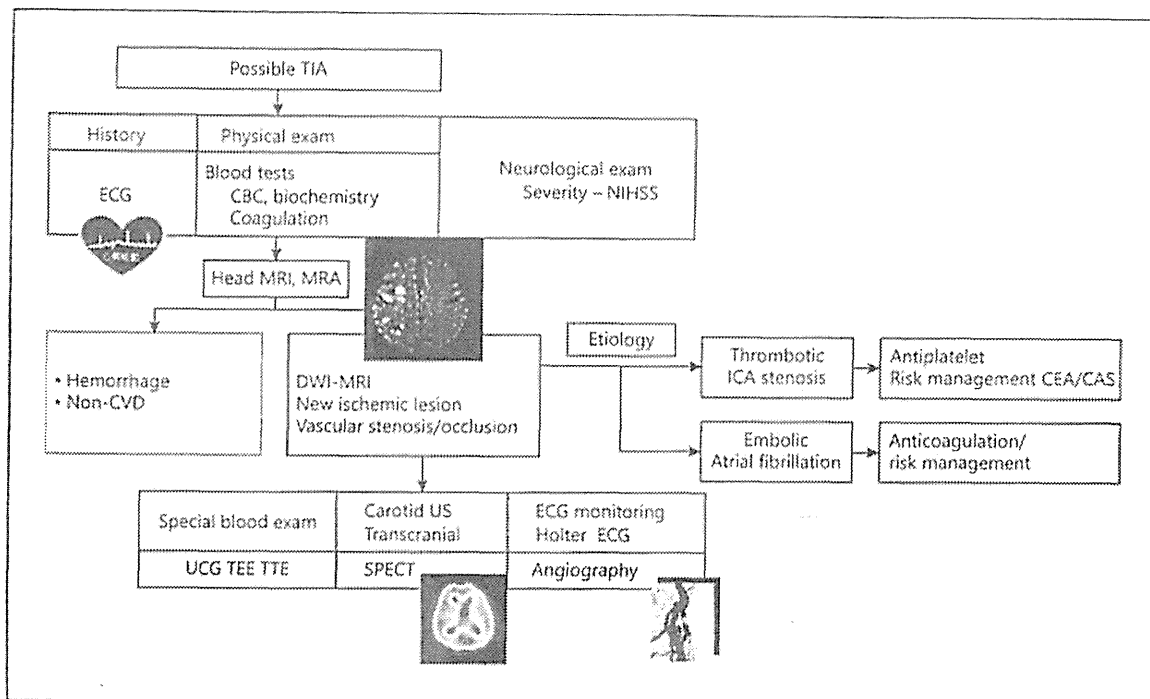
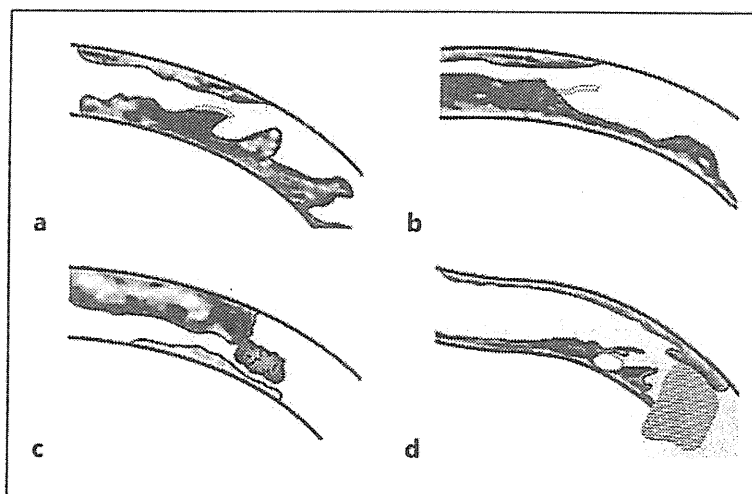


Fig. 3. Initial immediate screening for ACVS.

CT angiography are initially recommended to detect vascular stenosis. Such examinations should be completed by the end of the first outpatient or admission day. ECG monitoring, Holter ECG and specific blood tests such as brain natriuretic peptide and D-dimer are also simultaneously recommended to confirm cardioembolic etiology in specialized clinics. To detect paroxysmal AF (PAF), repeated, long monitoring ECG is essential. If necessary, cerebral angiography and single photon emission tomography are used to measure cerebral blood flow during hospitalization (fig. 3).

Plaque properties must be evaluated before vascular reconstruction to treat symptomatic severe carotid stenosis. The degree of stenosis and flow velocity is examined using carotid ultrasonography (US), and then plaque properties are determined using US and MRI. Unstable plaque at the origin of the ICA can be detected on US, MPRAGE or by the black blood method using MRI. Low echoic mobile plaque, a thin fibrous cap, and ulcer formation determined by carotid US indicate high risk for subsequent ischemic attacks. Mobile plaques have been defined (fig. 4) as the jellyfish type, on which a thin fibrous cap fluctuates, the streaming band type, in which swaying fibers are attached to the plaque, the mobile thrombus type, in which a mobile mass is attached to the plaque surface, and the fluctuating ulcer type, which contains mobile substances and an ulcer. The rate of early recurrence is significantly higher in patients with mobile than non-mobile plaques [22]. Intracranial collateral circulation is evaluated by MRA and calcified lesions are determined by CT angiography. Cardiac examinations to detect significant coronary disease such as SPECT are also necessary before any surgery. A final diagnosis is confirmed by DSA. In summary, severe ICA

Fig. 4. Morphological classification of mobile plaques. Jellyfish (a), streaming band (b), mobile thrombus (c) and fluctuating ulcer (d) types. Rate of mobile plaque: 12.8% in 94 acute-stroke patients. From Ogata et al. [22].



stenosis with unstable mobile plaques are closely associated with early stroke recurrence. Immediate secondary prevention, optimal perioperative medical treatment, and standardized operative techniques have enabled neurologically stable patients with TIAs to undergo CEA/carotid artery stenting as an acceptable risk of stroke. Further study of the relationships between procedural risk and the timing of surgery is required.

Close observation during hospitalization has the potential to allow more rapid and frequent administration of tissue plasminogen activator should a stroke occur. Hospitalization might also confer other benefits derived from cardiac monitoring and rapid diagnostic evaluation. A recent study identified AF during the early phase of cryptogenic ischemic stroke, indicating that such patients might have undetected PAF. The Stroke and Monitoring for PAF in Real Time (SMART) registry was established to determine the yield of 30-day outpatient PAF monitoring in patients with cryptogenic ischemic stroke [23]. An intent-to-monitor analysis detected PAF in 29 of 239 patients (12.1%; 95% CI: 8.6–16.9%). After a retrospective chart review, a new diagnosis of PAF was confirmed in 26 of 236 patients (11.0%; 95% CI: 7.6–15.7). Most of the detected PAF events were asymptomatic, and only 6 of 98 recorded PAF events (6.1%) were patient triggered or associated with symptoms. About 1 in 9 patients with cryptogenic ischemic stroke have new PAF within 30 days. Routine monitoring in this population should be recommended. A report from the National Cardiovascular Center indicated that patients with TIA accompanied by AF are slightly older, smoke less frequently, have less frequent episodes of TIA (one episode on average) and an obviously higher incidence of aphasia than TIA patients without AF [24]. No randomized trials have yet evaluated the benefit of hospitalization or the utility of the ABCD² score in assisting with triage decisions. In-hospital mortality was higher for patients with cardioembolic stroke (10.0% in our series) than with any other subtypes of cerebral infarction. Secondary prevention with anticoagulants should be started immediately in patients at high risk for recurrent cardioembolic stroke in which contraindications

such as poor compliance or gastrointestinal bleeding are absent. Dabigatran and rivaroxaban are useful to immediately prevent recurrent embolic attacks in TIA patients with AF and are recommended for patient with AF. These agents are not only similar to warfarin in their ability to prevent stroke or systemic embolism, but they can also lower the incidence of intracranial hemorrhage more effectively.

Importance of Awareness of Transient Ischemic Attack

No consensus about primary care has been reached in Japan regarding how to manage patients with TIA. Patients diagnosed with TIA are simply prescribed with aspirin and sent home directly from the emergency room. Medical staff will often regard TIA as a trivial transient neurological event and a different clinical entity from acute ischemic stroke. Moreover, almost all citizens are unaware of the risk of TIA and its clinical relevance. Awareness of TIA as an ACVS that requires early management like acute coronary syndrome must be disseminated. Citizens should understand the high risk of subsequent stroke during the first several hours after TIA onset and that the risk cannot be controlled unless treatment is started before a stroke occurs. Thus, citizens should be educated about treating TIA as soon as possible and to take instant action from all viewpoints [25], including immediate presentation at a TIA clinic. Educational campaigns are needed to teach citizens about the higher prevalence of comorbid diseases, such as hypertension (65 vs. 39%), diabetes mellitus (26 vs. 15%), and dyslipidemia (29 vs. 27%) in patients with TIA and carotid stenosis, than in those without. Most studies have found that less than half of stroke/TIA events result in a 911 call. One study found that 40% of 2,975 patients with stroke/TIA who met inclusion criteria used emergency medical services [26]. After adjustment, the symptoms that increased the odds of a 911 call were weakness, confusion/decreased level of consciousness, speech/language, and dizziness/coordination/vertigo. Numbness was less likely to result in a 911 call as were visual changes. The public appears to respond differently based on the type of stroke symptom, regardless of overall severity. Public awareness messages regarding stroke warning signs should be designed with this in mind. In addition, leaflets about TIA with toll-free telephone numbers for TIA clinics have been sent to family doctors, cardiologists, neurologists and ophthalmologists in various areas and their administrative regions [9]. The effect of increasing TIA awareness through media campaigns in the city of Fukuoka on changes in public behavior has been examined by the Kyushu Medical Center group using an on-line survey. The respondents were 618 individuals with no history of stroke living in Fukuoka prefecture. Pre- and post-surveys were conducted in March and June 2011, respectively. Awareness of TIA as a medical emergency and a risk factor in subsequent stroke was spread in newspapers, magazines, banners and transit advertising as well as at public events, and on the radio and TV over a 2-month period. Among 608 respondents, 72 (11.7%) had seen and 131 (21.2%) might have seen the advertisements. Newspaper,

TV, and hospital posters seemed particularly effective. A comparison of individual attitudes before and after the advertising campaign showed that those who had seen the ads checked the disease information, consulted with others and attended hospitals or clinics more frequently than those without the exposure to the campaign. A nationwide educational campaign should focus on raising awareness of high-risk TIA using ABCD² scores and reducing stroke recurrence.

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脳卒中の前触れ「崖っぷち警報」を見逃さず すぐ治療すれば脳卒中の発作を予防できる

岡田 靖

脳卒中は、健康な人に突然起こる病気ではありません。食べすぎや運動不足、喫煙といった悪しき生活習慣や、高血圧を放っておくことなどによって血管が少しずつ傷つき、それが積もり積もって、ある日、大きな発作が起こるのです。死亡や後遺症を避けるために、脳卒中が疑われたら、救急車を呼んだり、専門病院に連れていったりなどして、できるだけ早く治療しなければなりません。

また脳卒中には、血管が破れる「脳出血」と、血管が詰まる「脳梗塞」がありますが、脳梗塞の場合は、発症する前に「前触れ」となる症状を一時的に起こしていることが少なくなく、それらは一過性脳虚血発作（TIA）と呼ばれています。TIAは、脳梗塞を発症する前の最終段階であることから、「崖っぷち警報」と命名し、早急な対応が必要だということを一般市民に呼びかけています。

「崖っぷち警報」は脳梗塞の初期症状が一時的に現れ、自然に消失します。そのた

「崖っぷち警報」を見逃すな！

下記のような症状が突然起こり、すぐに消えたら一過性脳虚血発作（TIA）の疑いが。すぐに病院へ！

- 片腕の力が「だらん」と抜けた
- 片方の目が「スーッ」と見えなくなった
- 舌がもつれた、ろれつが回らない
- 歩きづらく、片側に倒れそうになった
- 顔がゆがんで、口元がしびれた

め、「疲れが原因だったのではないか」などと安易に考え、そのまま放置している人が多いのです。ところがこれまでのデータから、「崖っぷち警報」が起こった場合、90日以内に、15〜20%の人に、脳梗塞の発作が起こることがわかっています。さらに、そのうちの半数は、48時間以内に脳梗塞を発症しています。

「崖っぷち警報」を見逃さず、この段階で適切な治療を受ければ、脳梗塞の発作を防ぐことができます。また万が一、脳梗塞を起こしたとしても、後遺症を最小限に抑えられます。ですから、「崖っぷち警報」と思われる症状があったら、脳血管内科、神経内科、脳神経外科などの専門病院を受診してください。専門病院がどこにあるのかわからない場合は、ためらわず119番に電話をかけてください。

脳卒中は顔、腕、言葉で判断。周囲に 疑わしい人がいたらすぐ救急車を呼ぶ！

岡田 靖

脳卒中の発作が疑われるときは、一刻も早く専門病院を受診する必要があります。脳卒中かどうかは、「顔」「腕」「言葉」で判断します。次のページに判断法をまとめましたので、参考にしてください。そして、あなたの周りで、誰かがこのような状態になったら、「しばらく様子を見よう」ではなく、すぐに救急車を呼んでください。脳卒中の対応で大事なものは「時間」です。すぐに病院に搬送され、血栓溶解薬などを用いた治療が早く行われれば、後遺症が残らないこともあります。

これからの時代は、脳卒中を判断するのは、医師だけではありません。あなたの「この人は脳卒中かもしれない？」という判断と、すぐに救急車を要請する行動が、迅速な脳卒中治療に結びつきます。すべての人が脳卒中に襲われた人を助ける行動ができるようになってほしいのです。それが脳卒中による死亡や寝たきりを防ぐ第一歩になります。

脳卒中かどうかを「顔」「腕」「言葉」でチェック

顔



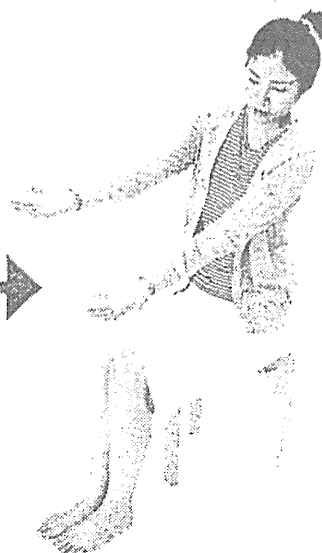
笑うように促し、片側にゆがみがあるなど表情が左右非対称になっていないかを確認



ニッコリ笑ってください

「チーズ」と言ってください

腕



手のひらを上に両手を前方に上げてください

片腕が揺れて内側に回る、腕がすぐ落ちる、もしくは上がらないなどの症状をチェック

言葉

脳卒中が疑われたら
119番
または専門病院へ

3つのチェックのいずれかが異常なら、症状が出た時刻を確認（発症から〇時間）し、救急車を呼ぶ

ようは...
れんきが...



「今日は天気がよい」と言ってください

何か話すように促し、不明瞭もしくは理解不可能な発言、あるいは発言がないか確認

