



英汉对照  
脑血管疾病  
文选

SELECTED ENGLISH TREATISES  
ON CEREBROVASCULAR DISEASE

(With Chinese Translation)

《国外医学脑血管疾病分册》编辑部 编

海洋出版社

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1996 年·北京

## 图书在版编目(CIP)数据

英汉对照脑血管疾病文选/刘上云,苏克江主编;《国外医学  
脑血管疾病分册》编辑部编. - 北京:海洋出版社,1996.9

ISBN 7-5027-4212-3

I. 英… II. ①刘…苏…②国… III. 脑血管疾病-防治  
-文集-英、汉 IV. R743-53

中国版本图书馆 CIP 数据核字 (96) 第 15949 号

特约编辑 范红英

海洋出版社 出版发行

(100860 北京市复兴门外大街1号)

海洋出版社印刷厂印刷

1996 年 11 月第 1 版 1996 年 11 月北京第 1 次印刷

开本: 787×1092 1/32 印张: 10.875

字数: 290 千字 印数: 1—2000 册

定价: 14.00 元

海洋版图书印、装错误可随时退换

主 编  
校 译

刘上云      苏克江

副主编

张以善      李艳芳

审 阅

张国瑾      顾振海

译 者

(以姓氏笔划为序)

马应成    王庆松    刘 跃

刘应万    刘新峰    朱京华

陈芷若    陈洪生    何济华

张兆成    杨华国    赵增荣

崔 娟    靳小中    翟 博

# 前 言

随着我国老龄化社会的到来,如何有效地防治危害人类健康以至生命的三大疾病之一——脑血管疾病,已成为医务工作者的重要课题。国际上,这一领域的临床和科研已获得了明显进展。我国广大基层医务工作者为提高脑血管疾病的防治水平,渴望从国外获得新信息、新知识和新成果。为此,《国外医学脑血管疾病分册》编辑部编辑出版了《英汉脑血管疾病词汇》一书,而后又编译了这本《英汉对照脑血管疾病文选》,期望能对致力于脑血管疾病防治工作的同道们有所裨益。

本书在充分体现原作者写作意图和原文编排格式的同时,又尽量使汉语表达方式符合国人的习惯。在选材方面着意于近年发表且有权威性的论著、综述或讲座,兼顾其他体裁的文章,以期使读者通过阅读不仅能提高阅译水平,而且能从中获得有关知识。文章的编排顺序体现了从基础到临床和从治疗到预防的原则。由于本书的篇幅所限,原文中的图表大部分都略去。

在本书的编写过程中,得到了海军医学高等专科学校有关领导的大力支持。本书付印前,顾振海教授、张国瑾教授等在百忙中对书稿进行了严格审阅,并提出了十分宝贵的修改意见。北京军区第 259 医院张英和《国外医学脑血管疾病分册》编辑部孟娟,在书稿文字输入过程中付出了辛勤的劳动。在此,我们对他们和所有关心、支持本书出版的朋友表示衷心的感谢。

由于我们的水平有限,尽管在各方面都做了努力,但仍难免出现疏漏和错误,恳望同道、专家及读者批评指正。

编 者

1996 年 6 月于南京

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# Types of Stroke

## 卒中的类型

Determination of stroke type can be crucial to rational treatment and prediction of outcome. With the use of CT and MRI and lumbar puncture, bleeding into and around the brain can be diagnosed and these types of stroke separated from the more common infarction. Subtypes of infarction can be diagnosed or suspected on the basis of the presence of other disease, the presentation and findings on examination, and the findings on brain imaging.

确定卒中的类型对于合理治疗和判断预后至关重要。应用 CT、MRI 和腰穿能诊断脑内及脑周围的出血,同时能将此类卒中与更为常见的梗塞相区别。根据存在的其他疾病症状、体征及脑影像所见,可疑诊或确诊梗塞的各种亚型。

### 1. Brain Hemorrhage

Approximately 10% of all strokes are due to brain hemorrhage. Hypertension, especially uncontrolled hypertension, is the leading condition associated with brain hemorrhage. Other predisposing conditions include ruptured aneurysm; AVM; cavernous angioma; drug abuse with cocaine, amphetamines, or alcohol; blood dyscrasia; anticoagulant therapy; amyloid angiopathy and brain tumor.

#### 1. 脑出血

约 10% 的卒中由脑出血所致。高血压,特别是未被控制的高血压是并发脑出血的主要病因。其他易引起脑出血的疾病包括动脉瘤破裂,动静脉畸形,海绵状血管瘤,吸毒(可卡因、安非他明)或酗酒,血液病,抗凝治疗,淀粉样血管病及脑肿瘤。

The clinical features of brain hemorrhage vary depending on the loca-

tion and severity of the bleeding. It is unlikely to be preceded by TIAs. The process is usually acute, frequently with severe headache and a decreased level of consciousness. Usually, the blood pressure is elevated at the time of the initial examination, even if there was no preexisting hypertension. (The clinical state can be graded according to the level of consciousness.)

脑出血临床特征千差万别,取决于出血的部位和程度,很少有短暂性脑缺血发作先兆。一般发病急骤,常伴严重头痛和意识水平降低。即使过去无高血压史,初次检查时血压通常仍是升高的(临床状态可根据意识水平进行分级)。

The most common locations of hypertensive bleeding are the basal ganglia, thalamus, lobe of a hemisphere, cerebellum, or pons. Deep hemispheric hemorrhages typically produce a contralateral hemiparesis and hemisensory deficit with aphasia in those patients with the dominant hemisphere involved. Aphasia can occur in cases of hemorrhage into the thalamus of the dominant hemisphere. The presence of oculomotor findings such as forced downgaze or upgaze palsy, unreactive miotic pupils, and convergence paralysis are characteristic of thalamic hemorrhage and help to differentiate it from putaminal hemorrhage.

高血压性出血的最常见部位是基底节、丘脑、脑叶、小脑或桥脑。半球深部出血有典型的对侧偏瘫和偏身感觉障碍,优势半球受累的病人可伴有失语。累及优势半球丘脑的病人亦可发生失语。眼球运动障碍如强迫性下视或上视麻痹、无反应的小瞳孔及辐辏麻痹为丘脑出血的特征。这些体征有助于与壳核出血相鉴别。

Patients with lobar hemorrhage into the cortex or subcortical white matter less frequently have a history of hypertension than those with deep hemorrhage. In elderly persons, amyloid angiopathy is common cause of lobar hemorrhage. Headache is a common feature. Disturbance of the level of

consciousness also occurs less often and is seen later in the clinical course. The neurologic deficits are more variable than in deep hemorrhage and depend upon the location and size of the hematoma.

与深部脑出血病人相比,脑叶皮质或皮质下白质出血的病人有高血压病史者较少。在老年人,淀粉样血管病是脑叶出血的常见病因。头痛是常见的症状。意识障碍也较少见,且出现较晚。与深部出血相比,脑叶出血时的神经功能障碍更为复杂多变,这主要取决于血肿的部位和大小。

Cerebellar hemorrhage usually occurs in one of the hemispheres, originating in the region of the dentate nucleus. Disequilibrium, limb ataxia, nausea, and vomiting are common early features. Patients with cerebellar hemorrhage frequently complain of headache and dizziness. The examination usually demonstrates a combination of signs indicative of cerebellar and pontine dysfunction. Peripheral facial palsy, nystagmus, miosis, decreased corneal reflex, and abducens palsy are the most common brainstem and cranial nerve findings.

小脑出血常发生于一侧半球,起源于齿状核区。常见的早期症状是失平衡、肢体共济失调、恶心及呕吐。小脑出血病人常主诉头痛和头昏。通常可查出小脑和桥脑体征。周围性面瘫、眼球震颤、瞳孔缩小、角膜反射减弱和外展麻痹是最常见的脑干和颅神经体征。

Primary hemorrhage into the brainstem usually has devastating effects, but occasionally a small hemorrhage occurs, producing limited dysfunction compatible with<sup>(1)</sup> functional survival. The neurologic deficit resulting from hemorrhage depends on the level of brainstem involvement, with the pons being the most common site.

原发性脑干出血常可致命,但偶而小量出血,则仅引起轻微功能障碍而不危及生命。此类出血所引起的神经功能障碍取决于脑干受累的平面,其中桥脑是最常见的出血部位。

Symptoms and signs may not distinguish brain hemorrhage from other stroke types, even though many patients with brain hemorrhage have untreated hypertension, and a large proportion present with obtundation and focal deficit. CT reliably shows intraparenchymal hemorrhage. Since the widespread use of CT, it has become evident that<sup>(2)</sup> a number of patients with a small brain hemorrhage will present with little headache or obtundation and a deficit indistinguishable from that of infarction. Thus, the only way to reliably diagnose hemorrhage is with the routine use of CT. A small percentage of patients with ischemic infarction will present with severe headache, rapid obtundation, and other clinical features indistinguishable from those of brain hemorrhage. Patients with brain hemorrhage rarely show any improvement in neurologic deficit during the first 24 hours.

尽管许多脑出血病人的高血压未经治疗,且大部分病人有反应迟钝和局灶性功能障碍,但依靠脑出血的症状和体征有时很难将脑出血与其他类型的卒中区别开来。CT能可靠地显示脑实质内出血。由于CT的广泛应用,使许多可能出现轻微头痛、反应迟钝和功能障碍很难与梗塞相区别的轻微脑出血病人得到确诊。因此,诊断脑出血的唯一可靠方法是常规应用CT。少数缺血性梗塞病人可表现为剧烈头痛,迅速出现反应迟钝和其他很难与脑出血相区别的临床特征。脑出血在最初24h内,病人的神经功能障碍极少会有好转。

## 2. SAH

The characteristic clinical picture of primary SAH ( in which the initial bleeding is into the subarachnoid space) begins with the sudden onset of a severe headache. The suddenness of the onset and the severity of the pain are usually dramatic. The headache commonly reaches a severe intensity in a matter of<sup>(3)</sup> seconds to a minute and is so severe as to alter the patient's pattern of activity. Often there is a rapid alteration of level of consciousness (including unconsciousness with recovery in a few minutes). Vomiting at

onset is frequent. Patients with SAH may be younger and less likely to have hypertension and other underlying disease before the onset of the stroke than patients with other types of stroke.

**Table 1. Status (Grade) of Patients With Intracranial Aneurysm With and Without Subarachnoid Hemorrhage**

| Grade | Symptoms and Signs  |
|-------|---|
| 0     | Unruptured aneurysm – no history or other manifestation of subarachnoid hemorrhage                              |
| 1     | Asymptomatic or minimal headache and slight nuchal rigidity   |
| 1a    | No acute meningeal or brain reaction, but fixed neurologic deficit  |
| 2     | Moderate to severe headache, nuchal rigidity, no neurologic deficit other than cranial nerve palsy              |
| 3     | Drowsiness, confusion, or mild focal neurologic deficit   |
| 4     | Stupor, moderate to severe hemiparesis; may also include early decerebrate rigidity and vegetative disturbances |
| 5     | Deep coma, decerebrate rigidity, moribund appearance  |

The clinical grade (Table 1) at the time of initial evaluation is a good index of short-term prognosis. There are usually no focal findings on examination, but the likeliest single finding is a partial oculomotor nerve palsy. Most patients have a stiff neck on bending the head forward or other signs of meningeal irritation (Kernig's or Brudzinski's signs). Subhyaloid (pre-retinal) hemorrhage may be found on fundoscopic examination. CT almost always shows blood in the subarachnoid space on the day of the hemorrhage, but there is a diminishing chance of finding blood with each day after the onset. In patients suspected of SAH who have a CT scan that does

not show blood, lumbar puncture should be done to confirm the diagnosis. In SAH, the CSF will be bloody, and the supernatant will be xanthochromic within a few hours after the hemorrhage.

## 2. 蛛网膜下腔出血

原发性蛛网膜下腔出血(指开始出血即在蛛网膜下腔内)的早期特征性临床表现是突发剧烈头痛。其发病的急骤性和疼痛的剧烈程度常常引人注目。头痛常在数秒至 1 分钟内达到极严重程度,以致病人不得不改变活动型式。病人意识变化常常很快(包括可在数分钟内恢复的意识丧失)。发病时常发生呕吐。与其他类型卒中病人相比,蛛网膜下腔出血病人可能较年轻,发病前患高血压或其他潜隐疾病者较少。

**表 1 伴有或不伴有蛛网膜下腔出血的颅内动脉瘤病人病情分级**

| 病情分级 | 症状和体征                          |
|------|--------------------------------|
| 0    | 未破裂动脉瘤—无蛛网膜下腔出血病史或其他表现         |
| 1    | 无症状或仅轻微头痛和轻微项强直                |
| 1a   | 无急性脑膜或脑反应,但有固定的神经功能障碍          |
| 2    | 中、重度头痛,项强直,除颅神经麻痹外无神经功能障碍      |
| 3    | 嗜睡,精神错乱或轻微局灶性神经功能障碍            |
| 4    | 昏睡,中、重度偏瘫;亦可包括早期去大脑强直和植物神经功能障碍 |
| 5    | 深昏迷,去大脑强直,呈濒死状态                |

早期的临床分级(见表 1)对蛛网膜下腔出血近期预后的判断是一项很好的指标。此时常查不出局灶性体征,最可能出现的一项体征是动眼神经不全麻痹。当头前屈时多数病人出现颈项强直或其他脑膜刺激征(Kernig 征或 Brudzinski 征)。眼底检查能发现透明膜下(视网膜前)出血。出血当天 CT 几乎都能显示蛛网膜下腔有血液,但以后发现出血的机会逐日减少。对 CT 未显示出血而又可疑蛛网膜下腔出血者,应进行腰穿以明确诊断。蛛网膜下腔出血时,脑脊液呈血性;出血

后数小时内,上清液可呈黄色。

SAH is usually due to a ruptured saccular aneurysm. The aneurysm can sometimes be viewed on CT or MRI, but usually an arteriogram demonstrating all<sup>(4)</sup> the intracranial vessels is necessary to demonstrate the lesion. Vasospasm and infarction in the arterial distribution of the vasospasm are common causes of disability after the first 48 hours following the onset of SAH.

Other causes of nontraumatic SAH include AVMs and neoplasms. In 10% ~ 15% of patients, no source can be demonstrated on complete angiography, and the prognosis is generally more favorable in such patients.

蛛网膜下腔出血常是囊状动脉瘤破裂所致。这种动脉瘤有时可被CT或MRI发现,但为了证实这种病变常需做能显示全部颅内血管的动脉造影。蛛网膜下腔出血发病48h后,血管痉挛及痉挛动脉分布区的梗塞是功能障碍的常见原因。

其他非创伤性蛛网膜下腔出血的病因包括动静脉畸形和肿瘤。10% ~ 15%病人的全脑动脉造影查不出病因,一般而言,这些病人的预后是良好的。

### 3. Intracranial Hemorrhage from an AVM

SAH, intracerebral hemorrhage, or a combination of both may occur from AVMs. It is characteristic that the hemorrhage has less pronounced symptoms and may be less severe than with ruptured aneurysms. There may be a history of seizures and sometimes focal cerebral symptoms and signs. In some patients, a bruit over the head may be present; in others, preretinal hemorrhage or retinal angiomas are present.

### 3. 动静脉畸形引起的颅内出血

动静脉畸形可引起蛛网膜下腔出血、脑内出血或两者并存。动静脉畸形出血的特点是症状较轻,病情亦不像动脉瘤破裂时那样重。病人可有癫痫发作史,有时可出现局灶性脑症状和体征。某些病人可出

现头部杂音；另一些病人可出现视网膜前出血或视网膜血管瘤。

#### 4. Brain Infarction

Patients with infarction generally have a medical history that includes one or more risk factors for stroke. That is<sup>(5)</sup>, patients are unlikely to have been completely healthy before the stroke. Although many of the patients have hypertension, diabetes, and heart disease, previous TIAs and strokes are also common. Severe headache and vomiting are unusual at the onset of brain infarction. The deficit generally comes on rapidly and may continue to worsen over hours or days. Patients present with focal neurologic symptoms and signs, for example, hemiparesis and sensory impairment, with carotid-distribution infarctions.

#### 4. 脑梗塞

脑梗塞病人一般都有一种或多种卒中危险因素等病史,换言之,这些病人在卒中前不可能完全健康。许多病人有高血压、糖尿病和心脏病,但有短暂性脑缺血发作和卒中史者亦很常见。脑梗塞发病时很少出现剧烈头痛和呕吐。常迅速出现功能障碍,且可在数小时或数天内持续加重。病人有局灶性神经症状和体征,如颈动脉分布区梗塞时可出现偏瘫和感觉障碍。

##### (1) Mechanisms of Ischemic Infarction

##### 1) Thrombotic

Thrombotic infarction usually occurs when a thrombus is superimposed on an atherosclerotic plaque. In some circumstances thrombotic infarction may be precipitated by an abnormality of blood clotting.

##### 2) Embolic

Embolic infarction is due to occlusion of an artery by an embolus distal to a point where adequate collateral blood flow is available.

##### 3) Hemodynamic

Hemodynamically determined infarction most commonly occurs

when there is severe stenosis or occlusion of the proximal arterial supply to a portion of the brain and collateral compensatory blood flow is inadequate while global cerebral perfusion is critically decreased<sup>(6)</sup> (for example, with decreased cardiac output).

### (1) 缺血性梗塞的发病机理

#### 1) 血栓性

当动脉粥样硬化斑上有血栓形成时,常发生血栓性梗塞。在某些情况下,血栓性梗塞可由凝血异常而促发。

#### 2) 栓塞性

栓塞性梗塞是由可形成丰富侧支血液循环处远端的栓子引起动脉闭塞所致。

#### 3) 血液动力学性

当供应脑某一部分的动脉近端有严重狭窄或闭塞而侧支循环又不足以代偿时,全脑灌注急剧减少(如心输出量减少),最常发生的是血液动力学性脑梗塞。

### (2) Clinical Categories

Infarction is commonly considered to be atherothrombotic, cardioembolic, or lacunar. Perhaps 30% ~ 40% of patients with infarction cannot easily be classified clinically as having one of these types and are best labeled as having infarction of unknown type. Even if the usual differentiating criteria are met, the assumed diagnosis is not certain.

#### 1) Atherothrombotic

This type of infarction occurs with atherosclerosis involving selected sites in the extracranial and major intracranial arteries. There are two main ways in which atherosclerosis produces infarction. First, the plaque may enlarge to seriously compromise the lumen of a blood vessel, but more often this happens with a superimposed thrombus. When a vessel occludes, a stagnation clot may form above the original occlusion and propagate distal-

ly.

The second mechanism by which an atherosclerotic plaque causes infarction is embolism of thrombus or plaque fragments (artery-to-artery embolus). A history of TIAs and cervical bruit is more frequently found in persons with atherothrombotic infarction than in those with other types of stroke. Clinical diagnosis rests on finding evidence of arterial stenosis or occlusion thought to be due to atherosclerosis at one or more sites.

The infarct may be small and indistinguishable from a cardiac embolic infarct.

## (2)临床分类

一般认为,脑梗塞是动脉粥样血栓性、心原栓子性或腔隙性的。临床上约30%~40%的病人很难归于上述类型中的哪一类,只好列为不明类型的梗塞。即使推论性诊断符合一般鉴别诊断标准,但也不一定可靠。

### 1)动脉粥样血栓性

此类梗塞发生在动脉粥样硬化累及颅外或颅内大动脉的特定部位。动脉粥样硬化导致梗塞有两个主要途径。首先,粥样硬化斑可进行性增大而严重损坏血管腔,但更多见的是粥样硬化斑上又发生血栓。当一处血管闭塞时,闭塞起始处前方可形成停滞性血凝块并向远端扩展。

动脉粥样硬化斑引起梗塞的第二种机理是血栓或斑块碎片(即动脉至动脉栓子)导致栓塞。动脉粥样血栓性梗塞病人的短暂性脑缺血发作病史和颈部杂音比其他类型的卒中更常见。临床诊断的依据是一处或多处有动脉粥样硬化引起的动脉狭窄或闭塞。

这种梗塞可能很小,难以与心原栓子性梗塞相区别。

### 2) Cardioembolic

Although many authors have commented on the exceptionally rapid onset of this type of stroke, such is not uniformly the case. The onset be-