Advances in Stroke
Prevention and Health Services Delivery 2012–2013
Anne L. Abbott, PhD, MBBS, FRACP; Larry B. Goldstein, MD, FAAN, FANA, FAHA

Individual cohort studies may lack the sample size necessary for precise subgroup estimates of vascular risk. Whether women and men are at similar cigarette smoking-related stroke risk was uncertain. A meta-analysis of 81 cohorts, including almost 4 million persons, found both women (relative risk [RR], 1.83; 95% confidence interval [CI], 1.58–2.1) and men (RR, 1.67; 95% CI, 1.49–1.88) who are current cigarette smokers are at increased stroke risk with the risk similar regardless of sex (RR ratio for women versus men, 1.06; 95% CI, 0.99–1.13). Another study confirmed the association between physical inactivity and stroke risk (hazard ratio [HR], 1.20; 95% CI, 1.02–1.42), an effect that was partially attenuated by traditional stroke risk factors (diabetes mellitus, hypertension, body mass index, alcohol use, and smoking: HR, 1.14; 95% CI, 0.95–1.37), suggesting that exercise might partially reduce the effect of other risk factors or reflect a healthy-user effect.

Up to one third of strokes are cryptogenic. A randomized trial found that 7 days of noninvasive cardiac-event monitoring, in addition to a standard evaluation, beginning within 7 days of stroke detected atrial fibrillation in 44% of patients compared with 4% having a standard evaluation alone (P<0.001). Prolonged cardiac monitoring may reduce the proportion of patients with cryptogenic stroke resulting in more patients correctly diagnosed and treated.

Consistent with growing evidence of an association between vascular risk and cognitive impairment, analysis of data from a large population-based cohort found that having a poorer cardiovascular risk profile was associated with poorer cognitive function, an association that was present even in 35- to 44-year-olds. Better life-long cardiovascular health may pay additional dividends by reducing cognitive impairment.

Consistent with prior trials, the Stroke Prevention Study-3, a randomized trial comparing aspirin plus clopidogrel with aspirin alone for secondary stroke prevention after lacunar stroke, found no reduction in recurrent stroke (HR, 0.92; 95% CI, 0.72–1.16) or disabling or fatal stroke (HR, 1.06; 95% CI, 0.69–1.64) with dual antiplatelet therapy. The risk of major hemorrhage was almost double (HR, 1.97; 95% CI, 1.41–2.71) and all-cause mortality was increased by half (HR, 1.52; 95% CI, 1.14–2.04). Long-term dual antiplatelet therapy is not advisable for secondary stroke prevention. A short, early course after transient ischemic attack or stroke, however, may be helpful. A meta-analysis of 14 randomized studies including 9012 patients with noncardioembolic stroke found that, compared with monotherapy, dual antiplatelet therapy (particularly aspirin and clopidogrel) reduced the risk of recurrent stroke by 31% (risk ratio, RR, 0.69; 95% CI, 0.60–0.80) and a composite of stroke, transient ischemic attack, acute coronary syndromes, and death by 29% (RR, 0.71; 95% CI, 0.63–0.81), but with a nonsignificant increase in major bleeding (RR, 1.35; 95% CI, 0.70–2.59).

Patients with asymptomatic carotid artery stenosis are often followed up with serial duplex ultrasound to identify progressive stenosis aiming to reduce stroke risk using carotid endarterectomy. The average annual ipsilateral stroke rate, however, was only 2.6% in asymptomatic patients who progressed from a baseline 70% to 99% stenosis and 2.2% in those who progressed from a 50% to 69% stenosis when given medical treatment alone. These rates were lower than expected and might be further reduced with more intensive medical therapy. Because of advances in medical therapy, an international, multidisciplinary group concluded that the great majority of asymptomatic patients with carotid stenosis would not benefit from either carotid endarterectomy or carotid angioplasty/stenting. The same group concluded that carotid angioplasty/stenting for an average surgical risk symptomatic patient is not currently advisable given higher stroke and death rates with stenting compared with carotid endarterectomy.

The Cholesterol Treatment Trialists conducted a meta-analysis of 27 randomized trials comparing statin therapy with controls in patients at low risk of vascular events. Stroke risk was reduced by 24% per 1.0 mmol/L reduction in low-density lipoprotein-cholesterol (RR, 0.76; 99% CI, 0.61–0.95) among those with a 5-year major vascular event risk <10%. New guidelines from the American College of Cardiology/American Heart Association provide recommendations for cholesterol treatment for primary and secondary prevention of vascular events, including stroke, in adults. Consistent with the Cholesterol Treatment Trialists meta-analysis, groups for whom statin therapy is recommended include those with a 10-year vascular risk (including stroke) of ≥7.5%. Measuring lipids to reach a specific low-density lipoprotein-cholesterol target was not thought necessary with the intensity of statin therapy based on vascular risk.
Statin therapy to reduce the likelihood of vascular events among those whose risk is sufficiently high to warrant therapy is a proven approach for reducing stroke. Whether dietary supplementation with Ω-3 fatty acids reduces vascular risk is controversial. The Risk and Prevention Study Cooperative Group now reports no benefit of n-polyunsaturated fatty acids in reducing the cumulative rate of nonfatal stroke, nonfatal myocardial infarction, or death in a randomized study of 12,513 patients with multiple cardiovascular risk factors.12

Providing a basis for the designation of Primary Stroke Centers, the provision of organized, multidisciplinary care for patients with acute ischemic stroke is associated with better outcomes. Two studies found that patients with intracerebral hemorrhage are just as likely to benefit from care in a Stroke Unit, one of the components of a Primary Stroke Center, as those with ischemic stroke.13,14 Similarly, care in a Primary Stroke Centers is associated with better outcomes for patients with intracerebral or subarachnoid hemorrhage compared with nonstroke center care.15 Additional research is required to determine the components of Stroke Unit and Primary Stroke Center care having the greatest influence on patient outcomes.

Reducing early hospital readmissions is a goal of US health-care reform. Older age, cardiovascular comorbidity, premorbid functional status, and having a serious adverse event while hospitalized are predictors of readmission within 30 days of stroke.16,17 Using US Agency for Healthcare Research and Quality criteria, however, only 1.7% of stroke discharges for Medicare beneficiaries were followed by a preventable early readmission among those whose risk is sufficiently high to warrant therapy.18

Disclosures
Dr Goldstein is a consultant for Pfizer (statins and stroke prevention). Dr Abbott reports no conflicts.

References
卒中进展
2012-2013 预防与健康服务

Advances in Stroke
Prevention and Health Services Delivery 2012–2013

Anne L. Abbott, PhD, MBBS, FRACP; Larry B. Goldstein, MD, FAAN, FANA, FAHA

(Stroke.2014;45:371-372. 郑州大学第一附属医院神经内科 李硕 译; 许予明 校)

单个队列研究的样本数一般达不到用于血管危险因素精确亚组分析的要求。吸烟对于女性和男性卒中风险的影响是否一致尚未定论。一项 meta 分析纳入了 81 个队列研究,包括将近 400 万样本量,结果表明在当前吸烟者中,男性 (RR 1.67, 95%CI 1.49–1.88 ) 和女性 ( RR 1.83, 95%CI 1.58–2.10) 的卒中发病风险相似,吸烟者的卒中发病风险与性别无关 (RR 1.06, 95%CI 0.99–1.13)。另一项研究证实了缺乏运动增加卒中风险 ( RR 1.20, 95%CI 1.02–1.42)。吸烟者缺乏运动增加卒中发病风险与性别无关 (RR 1.06, 95%CI 0.99–1.13)。

约 1/3 的卒中是不明原因的。一项试验对卒中发病 7 日内的患者随机分为两组,一组患者在常规心脏检查基础上,接受连续 7 天的非侵入性心脏监护,另一组患者仅接受常规心脏检查,结果发现,在接受连续 7 天的非侵入性心脏监护组有 44% 的患者被监测到心房纤颤,而常规组仅 4% 的患者检测到房颤 (P<0.001)。这项研究证实了长时程心电监护有助于发现心源性卒中,从而使患者能够得到及时治疗。

胆固醇治疗临床研究组进行了一项 meta 分析,纳入了 27 项随机临床试验,评估他汀类药物对低血管风险患者的作用。结果表明,对于 5 年大血管事件风险 <10% 的患者,LDL-C 每降低 1.0 mmol/L,卒中风险可降低 24%(RR,0.76; 99% CI,0.61–0.95)。2013 年美国心脏病学会 / 美国心脏协会 (ACSA/HHA) 联合发布了成人胆固醇治疗的最新指南:《2013 版成人降胆固醇治疗降低动脉粥样硬化性心血管疾病 (ASCVD) 风险指南》。与上述 meta 分析结果一致,新指南推荐 10 年血管事件风险 ≥7.5% 的患者应用他汀类药物,并且根据血管危险分层应用不同强度他汀类药物时,不再强调 LDL–C 需达到特定的目标值。

对于血管事件风险的高危人群,他汀类治疗被证实可降低卒中发病风险。关于饮食补充 Ω–3 脂肪酸是否降低卒中风险仍存争议。风险和预防研究合作组最近报道了一项随机研究,纳入了 12513 例多种心血管危险因素的患者,结果表明不饱和脂肪酸不会降低非致死性卒中、非致死性心梗和出血风险。

具有组织化、多学科的急性缺血性卒中患者管理与良好结局有关,这为初级卒中中心的认证提供了基础。两项研究发现蛛网膜下腔出血患者与缺血性卒中患者一样,可从卒中单元治疗中受益。同样,在初级卒中中心接受治疗的脑出血或蛛网膜下腔出血 (SAH) 患者的预后比在非卒中中心治疗的患者好。目前还需要更多研究来确定卒中单元和卒中中心的结构,以便使患者结局获得最大受益。

降低早期再入院率是美国医疗健康改革的目标。高龄、心血管并发症、发病前功能状态差和住院期间严重不良事件均是卒中 30 天内再入院的预测因素。然而,根据美国医疗研究机构和质量标准,仅有 1.7% 有医疗保险的卒中出院患者进入社区医疗中心接受预防性治疗。因此,需要制定一个有针对性、经济效益比佳的预防策略以降低早期再入院率。