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Prevent Stroke and Provide Coordinated Care

Situation

The most common causes of death in Japan are cancer, stroke, and heart disease. Stroke incidence and prevalence is increasing as the population is aging. It is estimated that 0.3 million new cases of stroke occur every year and there are 2.8 million stroke survivors in 2015.¹

Stroke patients must receive thrombolytic therapy (“clot busting”) with a tissue plasminogen activator (tPA) within three hours of having had a stroke for it to be effective, but the rate of usage in Japan is less than 3 percent.² The shortage and uneven distribution of physicians, coupled with inadequate utilization of information technology (IT), often result in uncoordinated emergency care. If not afforded access to expert care, stroke victims can be left immobile, incontinent, and unable to speak. As a result, stroke is the most common cause of bedridden care, accounting for one in three bedridden patients in Japan.³ Challenges also exist in sharing information between physicians and caregivers on rehabilitation needs, which can have a significant impact on a patient’s quality of life after suffering a stroke. Stroke care creates a significant economic burden and lost productivity for the supporting families and their communities as a whole. Stroke alone accounts for 10 percent of total medical costs.⁴ The average hospital stay for a stroke patient in Japan is 93 days.⁵

Among several sub-types, strokes caused by atrial fibrillation (AF) are the most deadly and debilitating strokes, with one in three patients with AF-related stroke ending up with death (13 percent) or bedridden care (20 percent).² AF is the most common sustained heart rhythm abnormality and causes one in five strokes — with the proportion increasing to one in three after the age of 80 as AF is more prevalent in older populations.⁶

Strong government leadership and adequate investments for stroke prevention are

desperately needed. Japanese society is aging to an unprecedented level, which would pose an unbearable burden of stroke in clinical, societal, and economic terms, if action for stroke prevention is not taken immediately.

According to a national public opinion survey conducted in 2011, 80.3 percent of Japanese would like more information about strokes and the prevention of stroke. The survey also showed that only 8 percent of Japanese are satisfied with the stroke emergency network in their region while 22.9 percent are dissatisfied and 44.1 percent say they do not have enough information about it.⁷

Much needs to be done for stroke prevention. Among others, special attention needs to be paid to prevention of AF-related strokes, which tend to be more severe and cause greater disability than any other types of strokes. Although there exists effective therapy, oral anticoagulation therapy (OAC), which lowers stroke risk by two-thirds if appropriately used,⁸ significant challenges remain: 1) many AF patients are thought to be left undetected — in fact stroke is the first manifestation of AF for half of AF-related stroke cases⁹; 2) half of AF patients do not receive OAC¹⁰; and 3) even if they receive OAC, the treatment is often sub-optimal because OAC may be under-dosed,¹⁰ or patients may not adhere to the treatment.^{11, 12, 13}

Current Policy

The 2006 reimbursement revisions gave an additional 570 points (JPY5,700) to medical institutions that implemented a Stroke Care Unit (SCU). SCUs must have round-the-clock emergency care capabilities in order to provide tPA intervention within three hours of the onset of stroke, as well as meet additional requirements for rehabilitation.

The revised Medical Care Law (2007) mandates prefectures address five diseases including stroke. Stroke prevention is in general high

on the agenda of national and regional health policy, but without a comprehensive national policy framework, local governments rarely have dedicated strategies on the prevention of AF-related stroke. The electrocardiograph (ECG) tests are essential and effective for AF detection, especially among the elderly, but health check-ups for the elderly commonly do not include ECG or pulse check. The government of Japan is trying to reinforce the capability of payers to prevent and manage disease leveraging their health check-up/claim/nursing care data, where public health and healthcare collaboration is expected to play an increasing role. Payers encourage patients with AF or irregular pulse detected through health check-ups to consult physicians, and support subsequent patient management sharing patient information with physicians, whereas regional Medical Associations and Pharmacist Associations collaborate in developing care coordination between general practitioners (GPs), cardiologists, and pharmacists to ensure optimal AF management. The case studies selected below point to the right direction.

But, such coordination is rarely in place, lacking a national policy framework and practical guidance to encourage and facilitate a coordinated approach to care.

Recommendations

- Establish a basic law and develop a national health plan for stroke prevention and care.
- Raise societal awareness of the need to adopt monitoring, early diagnosis, and intervention for stroke, as well as the importance of stroke prevention, detection and management of risk factors including AF.
- Encourage patients at high risk for cardiovascular disease to seek medical care and intervention on a regular basis.
- Drive AF early detection by including pulse checks and ECG tests in health check-ups for the elderly, and make sure AF patients identified through the check-ups receive

optimal OAC treatment as appropriate by facilitating public health and healthcare collaboration.

- Integrate pulse checks into clinical practice — GPs and specialists should opportunistically screen all their patients aged 65 and over for AF, by pulse palpation, followed by ECG if irregular pulse is detected.
- Promote a regional network for stroke prevention and care, integrating AF management by fostering and rewarding better collaboration between GPs, hospitals, pharmacists, and nursing care services for long-term care.

Case Study 1: Ontario Stroke Network¹⁴

Ontario is the second-largest province of Canada (by area). With a population of 13 million, Ontario accounts for one-third of Canada's total population. The number of stroke patients is approximately 25,000 per year, of whom 15,300 remain hospitalized. In total, more than 90,000 patients suffer some kind of disability. Stroke care accounts for over 3 percent of the total healthcare cost in Canada, which is much lower than Japan's 10 percent. The Ontario Stroke Network (OSN) is an innovative, collaborative organization committed to enhancing stroke prevention and care for all Ontarians. The OSN is the credible advisor for the Ontario Stroke System and leads provincial initiatives and programs. The network is a responsive partner in integrated strategies aimed at improving patient outcomes, system efficiency, and access to care. It comprises nine Regional Stroke Centers that are connected to 16 District Stroke Centers, spread across other regional primary care centers. The annual age- and sex-adjusted in-hospital mortality rates due to stroke decreased 6 percent between April 2003 and August 2007.

Case Study 2: Shizuoka E2 Net¹⁵

Since 2007, Shizuoka Hospital and Shizuoka/Shimizu Medical Associations have been expanding "E2 Net," an AF care coordination

network between the hospital and GPs, with the number of GPs involved and AF patients registered totaling about 200 and 1,000 respectively, as of October 2014. Before the initiative started, complexity of AF management had been hindering active engagement of GPs with OAC therapy, which left many AF patients untreated or sub-optimally treated, while the hospital was overloaded with AF patients. This situation triggered the initiative, where 1) GPs voluntarily participating in the network refer AF patients to the hospital; 2) the hospital assesses the patients, develops treatment strategy, and starts OAC as appropriate; 3) the hospital refers the patients back to GPs, where patients are followed-up according to the treatment strategy; and 4) re-assessment at the hospital is repeated once a year. The network, which covers majority of GPs in the region, reduced the burden on the hospital and improved OAC treatment, with approximately 90 percent of AF patients registered now receiving OAC therapy.

Case Study 3: Izumisano Public Health Activities¹⁵

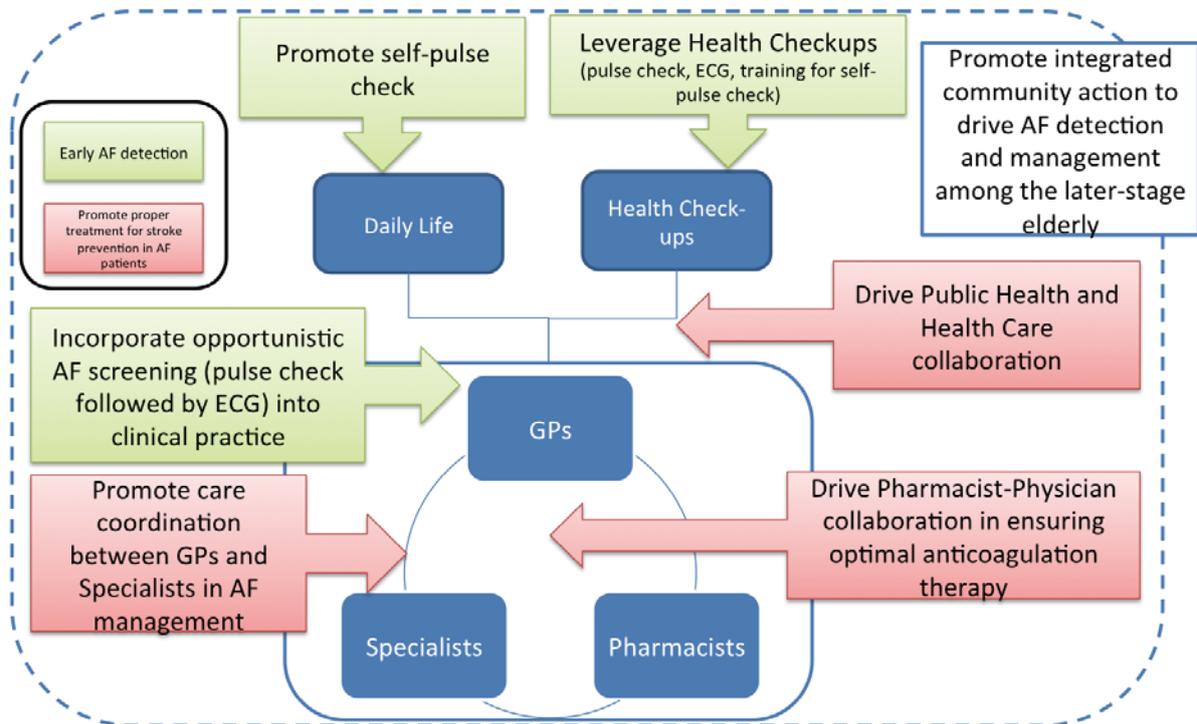
Regional governments and public health centers in Izumisano, Osaka have been working on

prevention of stroke, identified as one of the key target diseases causing the most significant socioeconomic burden in the region. In 2014, in addition to public campaigns primarily focusing on hypertension, they decided to develop practical guidance on public health activities for prevention of AF-related stroke, the most deadly and debilitating, but preventable stroke. The Izumisano-Sennan Medical Association was also engaged in this development. The joint working-group discussed what could be done for AF-related stroke prevention under the current health checkup system, where ECG is not necessarily included, without incurring significant additional costs. The guidance proposed included: 1) ECG and/or pulse checks by doctors or nurses; 2) referring patients with AF or irregular pulse detected to doctors; 3) establishing care coordination network for AF management; and 4) key measurements for assessment (details are publicly available at <http://www.task-af.jp>). Public health activities in the region are planned based on the proposed guidance, whereas the guidance is expected to be shared with peers in other regions, prompting regional actions elsewhere.

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