Small Changes In Treatment Keep Stroke Patients Alive

By RON WINSLOW

Stroke, until recently the third leading cause of death in the U.S., has dropped back to fourth place, reflecting a host of gradual improvements in preventing and treating the disease.

The change isn't a result of major advances in new medicines or devices. Instead, medical experts cite improvements in controlling people's risk factors such as high blood pressure and smoking. They also point to the increase in recent years in the number of designated stroke centers and emergency rooms that are specially equipped for stroke patients.

A recent study underlines the incremental progress being made. Researchers in California found that treating stroke patients with cholesterol-lowering drugs called statins throughout a hospital stay substantially improved survival rates and increased the chances of patients being discharged to their home instead of to a nursing home.

"In the country as a whole, there has been a dramatic reduction in stroke-related mortality in the last few years," said Larry Goldstein, director of the Duke Stroke Center at Duke University Medical Center, Durham, N.C. "We're learning more and more about preventing stroke."

In the 10 years ending in 2008, the latest data available, the death rate from stroke, as a percentage of the population, fell 35% while the actual number of deaths per year declined nearly 20%, according to the American Heart Association.

Still, the toll from stroke is daunting. Nearly 800,000 people in the U.S. suffer a stroke each year, according to the American Heart Association. Only cardiovascular disease, cancer and respiratory infections such as pneumonia kill more people. About seven million Americans are currently living after suffering a stroke, which is one of the main causes of disability. About half of these patients have weakness on one side of their bodies; 30% are unable to walk without assistance; and 26% are in nursing homes, according to data from the Framingham Heart Study. Treatment costs for stroke total nearly $20 billion a year.

The failure to recognize or act quickly on stroke symptoms is one of the biggest barriers to improved care. The only approved drug to treat acute stroke is the clot-buster known as tPA, which has to be given within three hours of the onset of symptoms, though guidelines allow up to 4½ hours in some cases. Only about 5% of stroke patients arrive at the hospital in time to get tPA, experts estimate.

Designated stroke centers, which are certified by the Joint Commission, a hospital regulatory body, typically have systems for emergency-room doctors to notify an established stroke team of a possible patient and to streamline the path to imaging tests that can confirm if a stroke has taken place. The systems also maintain communication with ambulance crews to speed a patient's time to treatment, said Ralph Sacco, head of neurology at University of Miami Miller School of Medicine.

Statin drugs—known mostly for their ability to lower LDL, or bad cholesterol, to reduce risk of heart attack—are also an important weapon for preventing and treating stroke. Current guidelines, for instance, call for patients hospitalized for stroke to be discharged with a prescription for a statin. But the guidelines say little about whether to use the medicines while a patient is hospitalized for stroke.

In two recent studies, researchers at Kaiser Permanente, the big Oakland, Calif.-based
health plan, combed the electronic medical records of 12,689 stroke patients in the plan's database. They found that giving statins to the patients while they were still in the hospital reduced the death rate after one year by nearly half—to 6%—compared with 11% among patients who began taking the drugs after their hospital stay.

For patients already on statins, the improvements were even more dramatic. The one-year death rate for stroke patients who were taking statins when they were admitted to hospital and continued taking them through the stay was 5%, the researchers found. But when statins for patients already taking the drugs were stopped during the hospital stay, even for a brief time, the one-year death rate jumped to 23%.

Hospitalized patients may not get statins because a stroke affects their ability to swallow, doctors say, or because they can’t take them because of side effects such as muscle pain. Some physicians prefer to wait till the acute event subsides before prescribing the drugs.

Patients on statins “need to know that if they have a stroke and stop taking them, they have a 1-in-4 chance of dying…. And if they keep taking them, they have a 1-in-20 chance of dying,” George Halvorson, Kaiser Permanente's chief executive, said in a recent email to the health plan’s staff that highlighted the research. He suggested that a patient's family should advise doctors of the statin use.

A second study found that stroke patients given statins in the hospital were 20% more likely to be sent home after their stay rather than to a nursing home.

“We don't know what the mechanism is” for statins to have such an effect, said Alexander Flint, a researcher in Kaiser Permanente's neuroscience group in Redwood City, Calif., who led both studies. “But what we're seeing is that being on a statin early during the hospitalization improves several different outcomes” for patients.

The study has limitations. It is an observational study, not randomized, meaning that differences in individual patients that might confound the results couldn't be accounted for.

But researchers applied special statistical techniques they said were designed to minimize any such distortion.

Patients in the study were treated at any of 17 Kaiser Permanente facilities and half were treated with statins while in the hospital. Now, nearly all will get them: The health plan has made statin therapy in the hospital standard practice for stroke patients.