Mike Smith

Stroke Victim due to Small Vessel Ischemic Disease

Information from consultation with Mike's Doctors

June 16, 2017

This report compiles a summation of information provided by doctors' reviews and comments made about the illness during treatment at UVA.

CAUSE OF THE STOKE:

According to Dr. Andy Southerland, the stroke you experienced was caused by four factors, two most prevalent is High Blood Pressure and out of control Diabetes. This combination caused the disease to lead to a stroke: **Small Vessel Ischemic Disease**

First is the lack of understanding of the Diabetic Disease. Your lack of understanding of the overall impact that Diabetes will have on the organs and their function comes from not taking the Diabetic Education Course offered through UV.

Second is the failure to test your blood sugar glucose before each meal and two hours after eating. Because of this failure you were not able to know that your blood glucose was spiking, putting you in a dangerous situation. This caused your blood vessel in your brain to react to the high glucose reading, leading to the stroke.

Third is the failure to take the Metformin and properly understand the medication prescribed by Dr. Campbell. Without Dr. Campbell requiring you to test your blood on a regular basis he would have no way of determining if the medication was actually working. So the combination of Dr. Campbell prescribing medicine to a patient with no way of monitoring long term affect to a patient who is not educated to the disease that is destroying his body makes for a ticking time bomb that exploded.

As Dr. Southerland explained, there are thousands of tiny blood vessels no bigger than the size of your hair, that go deep into the brain,. It was one of these vessels that reacted to the lack of Metformin and the high blood glucose that caused your stroke. Knowing this, you have to ask yourself if one blood vessel caused so much damage, and I have thousands blood vessels in my brain then how many more are about to explode? Well, that's the question you now ask yourself for the rest of your life, isn't it. This disease is called **Small Vessel Ischemic Disease.**

Fourth Step discussed was eating habits. You no longer have the privilege to eat whenever and whatever you want. I hope you start monitoring your blood glucose before each meal. You should restrict your eating habits to three meals per day no larger than the size of your fist. Eat no more than 60 carbohydrates per meal. You may have one snack between meals. I suggest a small apple or celery. Carrots are high in sugar so be careful

of types of vegetables you eat. Some vegetables can drive up your glucose readings like potatoes and beans, etc. You will learn all about this in Diabetic Education.

HOW DO YOU OVERCOME THIS DISEASE.

FIRST STEP: Get an Endocrinologist (Dr. Jen Kirby – UVA Endocrinologist – Diabetes Center at Fontaine Endocrinologist)
Dr. Campbell is a general practitioner not an Endocrinologist. In today's medicine, some doctor (family doctor) has to be the single point of failure or success. Dr. Campbell is not a specialist and you are about to find out that there are going to be several specialist that come into your life so accept that and welcome the opportunity to do what they tell you so you can have a better quality of life. As Dr. Andy Southerland told me, Dr. Campbell needs to refer you to an **Endocrinologist** (Diabetic Doctor). The Endocrinologist will require you to start testing your blood and will work to get your A1C back to normal (Currently 9.4, dated 6-10-17) which is a dangerous level. Dr. Campbell should also refer you to a Urologist specialist since you have prostate issues which may cause an infection. Keep in mind that diabetes destroy the organs so you can't continue to be so lax regarding diabetes.

SECOND STEP: Get an Education
Diabetic Education is taught at UV, Diabetes Center at Fontaine. I was told that the class is very good. Since this is a national program, I can only imagine that since the hospital is involved, as my hospital was, that the program must be an excellent important opportunity for you. You must take this course as the initial step in your over all recovery and to improve the quality of your life. This course will teach you things that you can't imagine about food nutrition as well as its destructive qualities for a diabetic. It will also teach you about your new food restrictions. You will be taught 60 carbs per meal and the meal should not be larger than the size of you fist. A small apple snack between meals. This recipe will not change for the rest of your life so deal with it, and move on to live longer.

THIRD STEP: Testing your blood glucose
Normal Reading should be between 70-130 in the morning before meals
80-140 - 2 hours after meals
You kept asking the nurse why you have to "stick" yourself so many times. Testing blood glucose is essential if you don't want to end up as a vegetable or die. If you had tested your blood as instructed you would have seen that your readings were off the chart and you could have taken preventive action and the stroke would probably not have happened. You would have been able to see that not taking the Metformin in lieu of the new prescription caused some undesirable reaction in your body. When you have high glucose readings the body starts to react to the increase in glucose. You can become dizzy, have blurred vision, become blind, develop a brain fog, which creates forgetfulness and uncertainty. You can also start developing pain in the toes and fingers which can lead to the amputation of toes, feet and legs. The worst you can have a stroke and end up laying in your on excrement, or just plain die. So buck up cowboy and start testing.

FOURTH STEP:
The Endocrinologist may increase your Metformin and add an insulin shot at night or prior to each meal. As diabetes destroys the pancreas ability to deal with natural insulin you need to come to grips with this alternative. Again, you bought the ticket you've got to take the ride. So saddle up and move forward.

FIFTH STEP:
The Endocrinologist will guide you to a Nutritionist. You met a Nutritionist from Auburn while you were seeing the doctors. A nutritionist will guide you to making smart choices in food and eating habits. You really need to pay attention to these instructions if you want to improve the quality of your life. You simply cannot continue to live as you once did. You have to redefine yourself, in lieu of this decease.

SIXTH STEP:
You will need rehabilitation to regain you speech and motor skills. You may want to ask them collectively about aerobics. Strengthening exercises are very good but you also need to focus at least 15 minutes minimum on aerobics (walking). Walking greatly improves the reduction of both high blood pressure and high blood glucose.

SEVENTH STEP: Make sure prior to leaving the rehabilitation hospital that you get a current list of medications you need to take. You will be the only person who will be aware of any changes made to your medication regiment. Dr. Southerland sent over the revised list from UVA to Health South but they may also make changes prior to your release.

FINAL STEP:
You need to retrain (rewire) the brain to take care of yourself. You can't expect Taylor to help you. She has a tremendous up hill climb with her health problems. She simply does not have the strength and energy to add your new handicap issues to her daily task. The best way to help Taylor is for you to be responsible for your behavior, medication, and responsibility to do what is required to get healthy and take care of yourself to make sure this does not happen again because of something you did or not did out of neglect.

This is why you need to think about possible homecare to assist you in taking the correct medication, driving you to doctor appointments, making sure you have food to eat and can make it to the bathroom. You may be incapacitated for several months. You will need to assess this after your rehab experience to see how for you have come. Although Jessica will want to help you during this time it will be at a heavy cost and strain between Matt and her so please consider that. What you will be going through in the next few months will not be easy for you.

You have only **ONE JOB**, and that is to stay alive.
You only have **TWO CHOICES** and that is a path to **DEATH** or the path to **LIFE**.

If you follow the doctor's advice and get the education you need and live by that new education, you will have a better quality of life. If you chose the path to death then it will be a humiliating, disgraceful and painful death.

What is cerebral small vessel disease?

Cerebral small vessel disease (SVD) is an umbrella term covering a variety of abnormalities related to small blood vessels in the brain. Because most brain tissue appears white on MRIs, these abnormalities were historically referred to as "white matter changes."

Per a recent medical review article, specific examples of cerebral SVD include "lacunar infarcts" (which are a type of small stroke), "white matter hyperintensities" (which are a radiological finding), and "cerebral microbleeds" (which means bleeding in the brain from a very small blood vessel).

In many cases, cerebral SVD seems to be a consequence of atherosclerosis affecting the smaller blood vessels that nourish brain tissue. Just as one's larger blood vessels in the heart or elsewhere can accumulate plaque, inflammation, and chronic damage over the years, so can the smaller blood vessels.

Such chronic damage can lead the small blood vessels in the brain to become blocked (which starves brain cells of oxygen, and which we technically call **ischemia**), or to leak (which causes bleeding, which we call hemorrhage and can damage nearby brain cells).

When little bits of brain get damaged in these ways, they can change appearance on radiological scans. So when an MRI report says "white matter changes," this means the radiologist is seeing signs of cerebral SVD.

Such signs of SVD may be described as "mild", "moderate," or "severe/extensive," depending on how widespread they are.

What are the symptoms of cerebral small vessel disease?

The severity of symptoms tends to correspond to whether radiological imaging shows the cerebral SVD to be mild, moderate, or severe.

Many older adults with cerebral SVD will have **no** noticeable symptoms. This is sometimes called "silent" SVD.

But many problems **have** been associated with cerebral SVD, especially when it is moderate or severe. These include:

- **Cognitive impairment**. Several studies, such as this one, have found that cerebral SVD is correlated with worse scores on the Mini-Mental State Exam. When

problems with thinking skills are associated with SVD, this can be called "vascular cognitive impairment."

- **Problems with walking and balance**. White matter lesions have been repeatedly associated with gait disturbances and mobility difficulties. A 2013 study found that moderate or severe cerebral SVD was associated with a decline in gait and balance function.

- **Strokes**. A 2010 meta-analysis concluded that white matter hyperintensities are associated with a more than two-fold increase in the risk of stroke.

- **Depression**. White matter changes have been associated with a higher risk of depression in older people, and may represent a contributor to depression that is particular to having first-time depression in later life.

- **Vascular dementia**. Signs of cerebral SVD are associated with both having vascular dementia, and eventually developing vascular dementia.

- **Other dementias.** Research suggests that cerebral SVD is also associated with an increased risk — or increased severity — of other forms of dementia, such as Alzheimer's disease. Autopsy studies have confirmed that many older adults with dementia show signs of both Alzheimer's pathology and cerebral small vessel disease.

- **Transition to disability or death.** In a 2009 study of 639 non-disabled older persons (mean age 74), over a three-year follow-up period, 29.5% of participants with severe white matter changes and 15.1% of participants with moderate white matter changes developed disabilities or died. In comparison, only 10.5% of participants with mild white matter changes transitioned to disability or death over three years. The researchers concluded that severity of cerebral SVD is an important risk factor for overall decline in older adults.

So what does this all mean, in terms of symptoms and cerebral SVD?

1.Overall, older adults with any of the problems listed above have a high probability of having cerebral SVD.

2. But, many older adults with cerebral SVD on MRI are asymptomatic, **and do not notice any difficulties.** This is especially true of seniors with mild cerebral SVD.

3. Seniors with cerebral SVD are at increased risk of developing the problems above, often within a few years time. This is especially true of people with moderate or severe cerebral SVD.

What causes cerebral small vessel disease?

This is a topic of intense research, and the experts in this area tend to really nerd out when discussing it. (Read the scholarly papers listed below to see what I mean.) One reason it's difficult to give an exact answer is that cerebral SVD is a broad umbrella term that encompasses many different types of problems with the brain's small blood vessels.

Still, certain risk factors for developing cerebral SVD have been identified. Many overlap with risk factors for stroke. They include:

- **Hypertension**
- **Dyslipidemia (e.g. high cholesterol)**
- Atrial fibrillation
- Cerebral amyloid angiopathy
- **Diabetes**
- Smoking
- **Age**