Summary of the January, 2009 Program

Post-Polio Syndrome and Neurology

Barry Kaplan, M.D. (Neurosurgeon)

Barry Kaplan, M.D. (Neurosurgery), was the guest speaker at the January meeting of the North Central Florida Post Polio Support Group at the Collins Center in TimberRidge Medical Park. Dr. Kaplan is a graduate of the University of Florida Medical School and served his residency at Shands Hospital in Gainesville, Florida.

Dr. Kaplan began by talking about post polio syndrome in general and then specifically discussed what a neurosurgeon would do for a PPS patient. In neurosurgery there are a lot of procedures done for pain control and neurological improvement in the spine, problems that specifically affect patients after they are middle aged. In patients with PPS, there are many extenuating circumstances that makes the neurosurgeon's work more difficult. In post polio patients, recovery from surgery of the spine, neck or back is much more difficult.

The peak incidence of polio was in 1952 when there were 21,000 cases and the vaccination that became available shortly afterward greatly reduced the incidence of polio in the United States, but it continues to be a major health problem throughout the world.

Post polio syndrome can occur in 25 to 50 percent of all patients who suffered from polio. Who gets PPS after the initial infection? If the initial infection is severe and a certain amount of time, at least ten to forty years has past since the initial infection and the recovery from the initial infection is quite good, all those are risk factors for post polio syndrome. One symptom for post polio syndrome is generalized muscle fatigue, this can be debilitating in every day lifestyle changes and some arthritic conditions of the spine can likewise cause fatigue. With muscular weakness in the legs or the arms, this can be a symptom of spinal stenosis that is an arthritic condition in the spine. It can be tough to distinguish between the symptoms of post polio syndrome and the symptoms of spinal stenosis.

Muscle and joint pain are also a major issue in post polio syndrome and that can be a result of added stress on the joints from muscular weakness. When the motor nerve cells are affected by PPS, a certain amount die. Once they die, they are unable to regenerate. If other nerve cells take over, they eventually fatigue out and neurosurgeons believe this causes post polio syndrome.

There are no specific tests for post-polio syndrome, it is more a diagnosis of exclusion. There are many causes of fatigue and you need to rule out other diseases such as thyroid disease and diabetes. EMGs need to be done to look for specific diseases in nerves and muscles. An MRI needs to be done to make sure there is nothing structurally wrong in the brain or spinal cord.

Falls, breathing disorders and osteoporosis need to be treated in PPS. You, as a patient, must dictate what and how much physical therapy you can do.

There are several drugs that have been prescribed for the treatment of post polio syndrome, however, none of them work.

Non-surgical treatment is recommended for post polio syndrome, always go conservative first. There can be respiratory problems from general anesthesia and it can put the patient at risk for respiratory failure or pneumonia. Ambulation and mobility after surgery is slower and there is the threat of blood clots that are an increased risk for PPS patients.

There is an increased risk of neurological problems with post polio syndrome. Motor-neurons that do survive are compensating. If you operate on them, they can have complications such as increased weakness and poor wound healing.

As he trained to become a neurosurgeon, Dr. Kaplan expected to be operating on brain tumors and blood clots. This is only about 10 percent of what a neurosurgeon does. Most of the surgery is on the lumbar and cervical spine. Most of the problems the neurosurgeon discovers on these parts of the spine is bone spurs, which can be quite painful. This is most common in people over the age of 50. There are several things that can be done short of surgery to treat these pain syndromes. First, physical therapy and medications such as anti-inflammatory agents and chiropractic care, these are all reasonable treatment for nerve irritation of the back. The next step is a cortisone shot. If surgery needs to be done, there are now minimally invasive techniques, which is recommended for patients with PPS. The spurs are removed through a small incision and the insertion of a tube under microscope control.

In the neck, it is better to operate by going through the front. You can remove bone spurs without going near the spinal cord. The spinal cord is an electrical cable and pressure causes pain and weakness. Bone spurs are usually on the front of the spinal cord and if you go through the back of the neck, you would have to go around the spinal cord, which is risky, to remove the spurs.

As post polio patients we must be careful to avoid surgery if at all possible. We are highly at risk for problems with anesthesia that can affect our breathing and we have difficulty healing. The longer we are weak, the harder it is to bounce back from surgery.

Dr. Kaplan concluded his presentation by answering questions from our group. We thank him for one of the most informative programs we have had the privilege of enjoying as a group.

Summarized by Sharon Daszczynski