

Hyperbaric Oxygen Therapy for Multiple Sclerosis

R. M. Parker, D.O., F.A.A.M.P.¹ and J. T. Taylor, D.O., F.A.A.M.P.¹

General Characteristics of M.S.

Multiple Sclerosis is a chronic, slowly progressive disease of the central nervous system characterized by multiple signs and symptoms and by remissions and exacerbations. It is characterized pathologically by disseminated patches of demyelination in the brain and spinal cord.

M.S. is the greatest single cause of chronic disability in young adults, usually striking persons in the 20 to 40 year age range. Around 500,000 people in the U.S., many of them young parents with children, are struck with this disease.

In M.S. for some unknown reason, the myelin sheath (protective covering of the brain and spinal cord) develops one or more seemingly random lesions causing the nerve impulses to be distorted so that the body cannot respond properly.

M.S. usually starts inconspicuously, with a sporadic weakness and numbness in the limbs, disturbance in the sense of balance, and dizziness. As the disease progresses, the walk becomes more unsteady, the mind

becomes affected, and emotional changes such as depression occur. Often, the vision also becomes impaired. Gradually the disease spreads to the brain, bone marrow, and other vital organs, with increased paralysis throughout the body.

HBO is a method by which oxygen is administered to a patient at greater than normal pressure in order to treat various conditions. The patient undergoing hyperbaric oxygen therapy inhales pure oxygen while in a pressurized chamber. The pressure in the chamber is gradually increased to the equivalent of 30 to 70 feet below the surface of water. At the end of the treatment the patient is decompressed to normal pressure.

Under normal circumstances O₂ is transported in the blood only by the hemoglobin in the red blood cells, which is 98 percent saturated with O₂. But, and this is the secret of HBO therapy, red blood cells constitute only 45 percent of the blood volume, while plasma transports very little O₂ under normal atmosphere pressure. When the hyperbaric pressure is raised to three times normal, it will provide enough O₂ in the plasma alone to sufficiently sustain life even in the absence of hemoglobin, as the amount of O₂ is increased from 10 to 15 times normal.

¹- 4714 S. Western Amarillo Texas 79109

Treatment

Patients are given 30 to 40 one hour treatments although a few require only five to ten. They may require maintenance sessions thereafter. They are also placed on a diet free of junk and foods to which they are allergic. Butter is used sparingly and margarine is avoided. Wheat, rye, oats, barley, milk products, and caffeine containing drinks are eliminated. Eggs raised in battery houses are avoided. Raw fruit and vegetables make an important component of the diet.

Dietary Supplements

Bromedyn - one tablet with meals and at bedtime.

Dismuzyne - one tablet with meals and at bedtime.

Vitamin E - 1000 units daily (natural).

High B Complex - 100 mg with meals.

Vitamin C - 6000-10,000 mg a day with meals.

Lecithin - 1200 mg with each meal.

Vitamin A - 25,000 units a day.

Thiamin - 500 mg, 1/2 hr. before meals.

Niacin - 475 mg, morning and evening with meals.

Results

Twenty patients were treated over a six month period. The response was excellent for 15 and slight for five. A few deteriorated several months after completing the series; a few booster sessions brought them back.

These results are illustrated by a few case histories.

A 48 year old female patient was brought to the Hyperbaric Oxygen Center. She had been diagnosed as having multiple sclerosis about ten years ago. She had gone continually downhill the past five years. She had become depressed and very weak. She had extreme difficulty talking and swallowing and was unable to stand. Her family brought her to the Hyperbaric Oxygen Center with hopes of stopping the relentless progression and getting her to feel a little better. They felt there was no chance of getting her on her feet again. Today, the family brought her in for her 20th HBO (Hyperbaric Oxygen) treatment and gave us a note from her nurse:

"Myrna is sitting in a kitchen chair this

morning saying her wheel chair is for sick people. She walked, with help, in here to see about the cat. Her outlook is so much better and she gets so excited about what she's going to do and how. Her speech is much better and she doesn't have much trouble swallowing the vitamins if she does it when she eats. For awhile they gagged her.

She jokes how we should bring the cat over there so Dr. Parker or Dr. Taylor could work on him. She did eat so much candy and sweets, but doesn't ask for them now. The vitamins have really helped too. She was so excited Friday she was almost hyper about her plans and what she is going to do. She wants to have a party for all the M.S. patients here and tell them about the HBO treatments and show them how she can walk now.

We can read her writing now. For awhile, she didn't even try to write. The most improvement is her walking and her outlook on things. She is even talking about getting a job."

We have a 40 year old female patient from Ft. Worth, Texas. She was diagnosed as having M.S. in September, 1976. She has received about 45 treatments over a period of two years, and now receives two or three treatments every three to four months depending on how she feels. She now works full time as a secretary, and can do more work than when she was first diagnosed over three years ago.

Another patient is a 47 year old engineer for General Dynamics in Ft. Worth, Texas. He was first diagnosed 11 years ago and has had a gradual downhill course ever since then. When he first entered our clinic, he needed help walking because of weakness and loss of balance. He knocked three pictures off the wall just getting to the examining room. He complained of double vision, bladder disfunction, ankle clonus, numbness in his feet, severe weakness, and difficulty ambulating because of loss of balance. He didn't talk much and seemed very depressed. He would have to think awhile before answering questions and didn't talk spontaneously at all. After four treatments, the

numbness in his feet began to improve. Gradually he became stronger and was able to ambulate better. He no longer knocked pictures off the walls when he came to the clinic (not very scientific, but actually a very obvious measure of improvement in many M.S. patients).

As he received more treatments, he was gradually able to get around better and could go shopping, etc. with his wife for short periods before needing to rest. After about 15 to 20 treatments, the patient began to talk and joke spontaneously. He went shopping with his wife for a four hour period without difficulty. His marriage seems to be more stable now, though he had never mentioned this as being a problem. This patient has returned to work at General Dynamics now and is scheduled to return every few months for a few treatments in the hyperbaric oxygen chamber.

Discussion

The use of HBO is not new, but only recently has it received the respectability and stature in medicine that it deserves. It now has been used in medicine with varying degrees of success for a myriad of maladies, including arthritis, some eye problems, air embolism, multiple sclerosis, burns, gas gangrene, crushing injuries, carbon monoxide poisoning, cyanide poisoning, numerous circulatory problems, head injuries, gastric ulcers, osteomyelitis.

Why hyperbaric oxygen therapy helps multiple sclerosis is not known but most likely it is due to the increase in the amount of oxygen.