

Hyperbaric Oxygenation Significantly Enhances Neurorehabilitation

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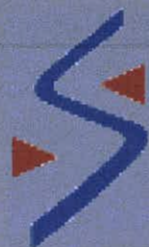
In most types of brain injury there is an area of irreparable damage which is surrounded by dormant, idling neurons receiving enough oxygen to exist but not to fire electrically. This is known as the Ischemic Penumbra. The recovery of this zone has been documented in hundreds of cases at the Ocean Hyperbaric Neurologic Center with single photon emission computerized tomography (SPECT) before and after HBO treatment. The reactivation of the zone however, is not the full answer to the problem. A significant factor in the conglomerate use of physical therapy, occupational therapy, speech therapy, acupuncture, neurofeedback and appropriate nutrition making this multidisciplinary. The patients treated at the Ocean Hyperbaric Neurologic Center are those of which have received all other possible therapies and have been told by the Neurologist or attending physician that nothing further can be done. Thus, each patient served as his or her own control since all other approaches had been attempted with negative results. There is no need for double blind studies in such severe cases. Plasticity becomes more effective. Further neural connection with dendrites is postulated. A recent publication has demonstrated an 85% correlation between improvement in the SPECT scan and the clinical outcome.

At the Ocean Hyperbaric Neurologic Center we deal with neurorehabilitation from the apollic state to those who simply can not re-enter society. Certain case presentations will demonstrate the results of a twelve year comatose patient from carbon monoxide intoxication who after 370 treatments with hyperbaric oxygenation along with neurorehabilitation was able to re-enter society. Thus, the period of time from insult does not preclude possible improvement. Other SPECT scan documentation, video, neuropsych evaluation with a local medical school has been performed on nearly all of these patients. The results have been encouraging in all age groups ranging from a six week old infant to a ninety- five year old genius. This was Edward Teller, Phd, who was responsible for the hydrogen bomb. Although, frequently positive in all age ranges it would be recommended that the sooner HBO treatments of neurologic problems are started the quicker reduction of damage. Hyperbaric Oxygenation should be thought of and utilized as early as possible rather than at the end of the line when all other measures have failed.

The combination therapy of Hyperbaric Oxygenation along with all modalities of neurorehabilitation eventually should become more routine. Hopefully this presentation will encourage further research.

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