Brain Disorders/Neurological

Hyperbaric Oxygen Therapy In Subcortical Frontal Syndrome Due To A Disorder Of Small Arteries With Leukoaraiosis


Summary. Introduction.

Frontal leukoaraiosis (LA) is a common finding in patients with subcortical small-vessel disease and currently its pathogenesis is attributed to ischemic-hypoxic mechanisms. It associates to a vascular subcortical frontal syndrome (VSFS) for which an effective treatment does not exist. Clinical cases. We present four subjects from a prospective patient-blind controlled pilot trial to study efficacy and safety of hyperbaric oxygen therapy (HBO) vs hyperbaric air in VSFS with LA. All of them had frontal or extended LA on computed tomography scan and lacunes in basal ganglia and centrum ovale, with moderate to severe gait disorders, urinary dysfunction, cognitive impairment, and dependence in the daily living activities. Deficits had begun two to ten years before and had remained stable three months previous to the treatment.

Patients were assessed with validated scales and tests one week before and after being administrated ten daily sessions of HBO at 2.5 atmospheres absolute for 45 minutes with a multiplace chamber. Serious adverse effects did not occur. After treatment a noticeable gait, urinary and cognitive improvement was observed in all subjects, increasing their independence. They remained clinically improved during four to five months, after which the previous deficits reappeared. Then, three patients received ten daily sessions of air at 1.1 atmospheres absolute for 45 minutes (controls) and the other a new HBO regimen, which improved as the first time. From the controls, there were no changes in two, while the other did only improve cognitively.

Conclusion.

These patients show that HBO is effective and safety in reversing, at least partially, although at great length, chronic neurological deficits associated to vascular frontal LA, highlighting that a functional reserve therapeutically useful exists.

[REV NEUROL 1999; 28: 655-60].
Key words. Activities of the daily living. Gait disorder. Hyperbaric oxygen therapy. Leukoaraiosis.

Reprinted with Permission

Legal Disclaimer

The content and information provided within this site is for informational and educational purposes only. Consult a doctor before pursuing any form of therapy, including Hyperbaric Oxygen Therapy. The Information provided within this site is not to be considered Medical Advice. In Full Support of the F.D.A., Hyperbaric Oxygen Therapy is considered Investigational, Experimental, or Off Label.

Please consult with your Treating Medical Physician