**Brain Disorders/Neurological**

Hyperbaric Oxygen in the treatment of fecal incontinence secondary to pudendal neuropathy.

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**PURPOSE:**

Hyperbaric oxygen therapy has several physiologic effects on damaged nerves in animal models, which lead to an improvement in neurologic function. Idiopathic fecal incontinence secondary to pudendal neuropathy is usually treated with biofeedback, which shows improvement in only 50 percent of patients. **METHODS:** Thirteen patients (12 females, age range, 40-75 years) with chronic pudendal neuropathy and fecal incontinence were identified. They received 30 treatments of hyperbaric oxygen during a period of 6 weeks. Each treatment was at 2.4 atmospheres breathing pure oxygen for 90 minutes. Pudendal latencies were performed sequentially throughout the treatment and one and six months after it had finished. Questionnaires were used to assess improvements in symptoms and quality of life (Wexner fecal incontinence quality of life score). **RESULTS:** All patients completed the treatment without major complications. There was a consistent improvement of the latencies (on the left 2.36 msec initially, reduced to 2.08 msec at 6-month follow-up and on the right 2.23 msec, on the left reduced to 2.07 msec at 6 months). These improvements were significant (Wilcoxon's two-tailed, asymptomatic significance, comparing pretreatment to 6-month follow-up, left 0.005, right 0.003). Incontinence scores also improved (12.08 initially to 11.64 at the end of treatment, 10.55 at 1-month follow-up, and 10.45 at 6-month follow-up). Using the same test, the improvement in incontinence scores also was significant when comparing pre-end (0.05) and pre-one month (0.011) but not pre-six month (0.054).

**CONCLUSIONS:**

Hyperbaric oxygen therapy has improved pudendal nerve function and continence in this group of patients. The cause for this improvement in latencies is unclear at present but may be because of a direct effect on the nerve or an improvement in blood flow to the nerve through angiogenesis. However, these results are good enough to schedule further trials.

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