Brain Disorders/Neurological

Stereotactic Aspiration and Antibiotic Treatment Combined with Hyperbaric Oxygen Therapy in the Management of Bacterial Brain Abscesses.

Kutlay M, Colak A, Yldz S, Demircan N, Akin ON.

Department of Neurosurgery, GATA Military Medical Academy, Haydarpasa Training Hospital, Istanbul, Turkey (Kutlay, Colak, Demircan, Akin) Department of Undersea and Hyperbaric Medicine, GATA Military Medical Academy, Haydarpasa Training Hospital, Istanbul, Turkey (Yıldız).

OBJECTIVE::

Despite advances in surgical techniques in the management of the brain abscess, long-term antibiotics are as crucial to cure as the initial surgical procedure itself. This study was designed to evaluate the effect of adjuvant hyperbaric oxygen (HBO) therapy on the duration of antibiotic treatment.

METHODS::

Between 1999 and 2004, 13 patients with bacterial brain abscesses treated with stereotactic aspiration combined with HBO and systemic antibiotic therapy. Patients younger than 18 years of age were excluded from this study. Postoperatively, all patients were given a 4-week course of intravenous antibiotics. Additionally, patients received hyperbaric oxygen (HBO, 100% O2 at 2.5 ATA for 60 min) twice daily for five consecutive days, and an additional treatment (100% O2 at 2.5 ATA for 60 min daily) was given for 25 days.

RESULTS::
There were eight male and five female patients. Their ages ranged between 18 and 71 years, with a mean of 43.9 years. The average duration of follow-up was 9.5 months (range, 8-13 mo). This treatment modality allowed infection control and healing for all 13 patients with 0% recurrence rate. HBO treatment was tolerated well, and there were no adverse effects of pressurization. At the end of the follow-up period, 12 patients had a good outcome: nine are without sequelae, and three have a mild hemiparesis but are capable of self-care. One patient has a moderate hemiparesis.

CONCLUSION::

Although the number of patients is small, this series represents the largest reported group of brain abscess patients treated with stereotactic aspiration combined with antibiotic and HBO therapy. Our preliminary results indicate that the length of time on antibiotics can be shortened with the use of HBO as an adjunctive treatment. PMID: 16331162 [PubMed - as supplied by publisher]

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