

Treatment of gastrointestinal radiation injury with hyperbaric oxygen.

Marshall GT, Thirlby RC, Bredfeldt JE, Hampson NB.

Section of General Surgery, Virginia Mason Medical Center Seattle, Washington, USA.

BACKGROUND: Chronic radiation enteritis develops in 5-20% of patients following abdominal and pelvic radiation. Current treatments are largely ineffective. **OBJECTIVE:** To assess the effectiveness of hyperbaric oxygen therapy (HBO2) as a treatment for chronic radiation enteritis and evaluate the relative effectiveness in treatment of the proximal and distal gastrointestinal tract. **DESIGN:** Case series of 65 consecutive patients with chronic radiation enteritis treated between July 1991 and June 2003 with HBO2. **SETTING:** A tertiary referral academic medical center. **PATIENTS:** 65 patients (37 male, 28 female; mean age 65 years) were treated with HBO2 for radiation damage to the alimentary tract. **INTERVENTIONS:** Patients were treated with an initial series of 30 daily treatments, each administering 90 minutes of 100% oxygen at 2.36 atmospheres absolute pressure. Thirty-two patients with partial symptom response or endoscopic evidence of healing received an additional 6 to 30 treatments. **RESULTS:** The primary indication for HBO2 was bleeding (n = 54) with 16 patients requiring transfusions. Additional indications were pain, diarrhea, weight loss, fistulas and obstruction. Follow-up ranged from 1 to 60 months (mean = 23 months). The main outcome measures were effects on bleeding, pain, diarrhea, weight loss, fistulas and obstruction. Endoscopic documentation of healing was used when available. The response rate was 68%, with a complete and partial response rate of 43 and 25%, respectively. The response rate for rectal disease was 65% and for proximal sites was 73%. The response rate for bleeding was 70% and for other symptoms was 58%. **CONCLUSION:** This series represents the largest clinical series reported using HBO2 for treatment of radiation injury to the GI tract. The findings suggest that HBO2 results in healing or clinically significant improvement in two thirds of patients with chronic radiation enteritis.

PMID: 17393937 [PubMed - indexed for MEDLINE]