



A Review of Hyperbaric Oxygen Therapy for Irradiation Cystitis in Hong Kong

SH YU¹, AHG WONG¹, CW WU¹, FS MOK², MH YU¹, CC NGO¹, KW WONG¹, SK LI¹, CM LI¹

¹Division of Urology, Department of Surgery, Pamela Youde Nethersole Eastern Hospital

²Hyperbaric Oxygen Therapy Centre, Department of Accident and Emergency, Pamela Youde Nethersole Eastern Hospital

Objective:

Irradiation cystitis is a common complication of pelvic radiotherapy and is associated with haematuria and frequent admissions. Hyperbaric oxygen therapy (HBOT) has been described as an effective treatment modality. The aim of this study is to review clinical outcomes of patients receiving HBOT for haematuria due to irradiation cystitis at a single institution.

Patients & Methods:

A retrospective review of all patients undergoing HBOT from January 2019 - June 2022 was performed. Patient demographics, initial presentation, treatment prior to HBOT, complications, HBOT regimes, outcomes and complications were assessed.

Results:

Twenty-nine patients (18 Male, 11 Female, median age 73y) with irradiation cystitis presenting with haematuria underwent hyperbaric oxygen therapy (HBOT). The average radiotherapy dosage received was 69Gy. Median time from haematuria onset to start of HBOT was 467 days. Nine patients required transfusion alone, 3 required cystoscopic haemostasis and 3 required both.

Twenty-four patients received ≥ 30 sessions with a mean of 33.8 sessions. Mean follow-up was 377 days. Overall, half of the patients experienced complete resolution of gross haematuria, 20% (n=4) experienced partial remission and 30% (n=6) had no improvement. 4 patients were lost to follow-up. Among patients with >1-year follow-up (n=8), 50% had complete resolution of gross haematuria, 25% had partial resolution. Six patients required hospitalization for haematuria during HBOT, with 2 requiring transfusion.

One patient had tympanic membrane perforation. 3 patients experienced barotraumatic otitis. Among 5 patients that experienced blurred vision, 3 developed cataract.

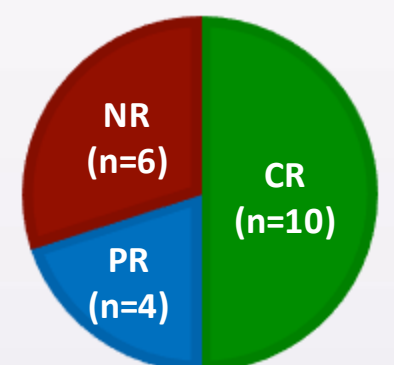
Conclusion:

Hyperbaric oxygenation is an effective treatment for haemorrhagic irradiation cystitis. Prospective long-term studies are needed to demonstrate durable efficacy and identify predictive factors to guide patient-selection



≥ 30 sessions

- Complete remission (50%)
- Partial remission (20%)
- No response (30%)



≥ 30 sessions + ≥ 1 year Follow-up

- Complete remission (50%)
- Partial remission (25%)
- No response (25%)

