

Hyperbaric Oxygen Therapy for Veterans with Chronic Traumatic Brain Injury and Post-Traumatic Stress Disorder (PTSD) Case Reports

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HBOT 1.5 in Blast-Induced TBI

Case Presentation: 59 year old Brigadier General

- 8/21/05: IED (Improvised Explosive Device) explosion with transient loss of consciousness (LOC), few seconds anterograde memory loss.
- Affected: nose, herniated disk, headaches, short term memory loss, malaise, fatigue
- Medical Evacuation: 10 days later - no memory of flights.
- Walter Reed: Extensive Evaluation. Cognitive deficits ("low normal" range on psychometric testing).
- Physical therapy, aqua-therapy, cognitive therapy (beneficial); but still significantly impaired and unemployable.
- Wife secures HBOT via physician friend in Pensacola, FL who has been using Harch protocol for a several years.
- HBOT: 1 year post TBI (traumatic brain injury). Harch protocol at George Washington University - 80 HBOTs, 1.5 ata for one hour in two blocks of 40 each.
- Noticeable improvement at 18 HBOTs.
- 25 HBOTs: Much more sociable, less napping.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 59 year old Brigadier General

- 80 HBOTs: significant reduction in back pain, improvement in cognition.
- Returns to part-time work as judge.
- Repeat psychometric testing: Improved.
- Partial regression 6 months post HBOT.
- Evaluation by Dr. Paul Harch in New Orleans - 11/2007.
- SPECT brain imaging.
- 10 additional HBOTs in Pensacola, FL.
- Improved cognitive function.
- Continues to function as criminal and civil court judge.
- Films segment on "Medical Breakthroughs"

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 25 year old machine-gunner (Humvee)

- IED explosion 3/15/05 with loss of consciousness <1min.
- 45 minutes anterograde memory loss.
- Tinnitus, headaches, off-balance, irritability.
- 1 month later - 2nd IED -"rattled, confused".
- 2 months later -3rd IED -"rattled, confused".
- Bilateral tinnitus and hearing loss.
- Nightmares on return to Camp Lejeune.
- Redeploys: 3 more IEDs + rocket propelled grenade - identical to 2nd and 3rd IEDs – "rattled and confused".

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 25 year old machine-gunner (Humvee)

- Worsened sleep problems, tinnitus, negative attitude/behavior, distrustful, change in personality.
- Camp Lejeune: Lost work ethic, reclusive.
- Months of bureaucratic fighting for hearing aid and various evaluations; became disaffected.
- Diagnosed with PTSD (10%), TBI (10%), hearing loss (0%).
- Told to: "Live with it, take pills, see a psychologist." Leaves the service.
- 4/7/08: Evaluated in New Orleans by Dr. Harch.
- Complains of headaches, tinnitus, sleep disruption, blurry vision, extreme irritability, marital problems, depression, cognitive deficits.
- Mild balance findings on physical exam.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 25 year old machine-gunner (Humvee)

- HBOT and SPECT: 4/7- 5/2/08. 39 HBOTs
- 1st HBOT: headaches gone
- 8th HBOT: Sleeping all night -1st time in 3 years.
- 12th HBOT: Energy up. Tolerates crowds. Goes to French Quarter Festival - 400k people in 1 day.
- 25th HBOT: PTSD GONE!
- 39th HBOT: Most symptoms improved or gone. Tinnitus and blurry vision without change.
- Patient symptoms improved.
- Repeat SPECT: Improved.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 25 year old Bradley gunner

- 5/2003: 1st IED with loss of consciousness for < 1 min. Dizzy, thick-headed, headache, nausea, visual halos.
- 12/2003: 2nd IED with loss of consciousness for 1 minute. Back injury. Headache, fatigue, photosensitivity, "silly" in head.
- Chronic headaches and back pain: starts drinking heavily.
- No medical evaluations.
- Honorable discharge.
- Diagnosis by Veterans Administration: PTSD, depression, personality disorder, L4-5 HNP, mild hearing loss.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 25 year old Bradley gunner

- 6/22/08: Evaluated in New Orleans by Dr. Harch.
- Complain of back pain, anger, resentment, memory problems, change in personality, nightmares, paranoia, fatigue, feels crazy.
- HBOT and SPECT: 6/23 - 7/22/08, 40 HBOTs.
- Post treatment symptoms: Cognitive function, sleep, fatigue, mood swings, anger now better.
- PTSD without change.
- Back pain unchanged, but appeared better.
- Using 30% less Xanax and markedly less narcotics.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 34 year old male

- 7/1/07: Simultaneous IEDs (2). Loss of consciousness for a few seconds. Headache, dazed.
- Later in day: photosensitivity, balance problems, fatigue. Evaluation: concussion.
- Progressive deterioration: short term memory, multi-tasking, headaches, change in personality, job dysfunction in Iraq.
- Evaluation at Ft. Rucker.
- Diagnosis: TBI/PCS (post concussive syndrome) - cognitive deficits, PTSD, migraine and other headaches.
- 6/25/08: Evaluation in New Orleans by Dr. Harch.
- Complain of headaches, cognitive deficits, irritability, sleep dysfunction, depression, foggy-headed.
- Previous medical history: ~ 9 previous TBIs with loss of consciousness pre-military.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 34 year old male

- Patient symptoms: balance, motor speed, clonus (involuntary muscular contractions due to sudden stretching of the muscle).
- HBOT and SPECT 6/26-7/31/2008, 37 HBOTs.
- 10th HBOT: "more clear thinking", increased energy.
- 12th HBOT: sleeping better. No headaches despite high PTSD (7/4 weekend explosions).
- 17th HBOT: marked deterioration headaches, fatigue.
- 31st HBOT: cognitively better.
- 37th HBOT: migraines less severe, perpetual "fog" gone, improved multi-tasking. Irritability w/o change. Patient symptoms improved.
- Patient feels 85-90% back to normal (5% improvement overall)

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 39 year old male

- 4/2003: large ordnance detonation, no loss of consciousness, but extreme confusion, severe headache and tinnitus. L numbness/balance problems next day.
- Persistent headaches, short term memory/cognitive problems, progressive work dysfunction.
- 3/2004: home. headaches, sleep problems, nausea, nightmares, inability to work.
- 9/2004: Severe headache, N, V, L side weak/numb. CT scan - acute on chronic brain bleed. Surgery to remove cavernous hemangioma (blood clot).
- Mental confusion worse post surgery.
- Eventual diagnosis: TBI, PTSD.
- 3/1/07: double vortex tornado passes over house. House implodes. Severe exacerbation of all symptoms - "felt like after the explosion in Iraq."

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 39 year old male

- Diagnosis: decompression sickness from extreme acute negative depressurization.
- Severe Obstructive Sleep Apnea diagnosed.
- 6/25/2008: Evaluated in New Orleans by Dr. Harch.
- Complains of headaches, short term memory/cognitive problems, imbalance, left side numbness/weakness, fatigue.
- Previous medical history: carbon monoxide poisoning with symptoms 1994 and 2002, concussion 1996 (2), 1998 - TBI with loss of consciousness, seizure, brain bleed into hemangioma, 9/2004-rebleed (acute and chronic), 11/2004 - craniotomy/resection.
- Patient symptoms: photophobic, imbalance, incoordination.
- HBOT/SPECT: 6/26-7/31/08, 38 HBOTs
- 1st HBOT: Thinking clearer, no photophobia. Slept 14 hours. 1st time slept more than 2-3 hours in 4 years.

HBOT 1.5 in Blast-Induced TBI

Case Presentation: 39 year old male

- 10th HBOT: headaches decreased, more alert, awake, balance better, more energy, no nightmares in more than 1 week.
- 15th HBOT: lethargy, worse headaches.
- 17th HBOT: mental capacity improved, energy level up.
- 20-27th HBOT: global deterioration in symptoms.
- 32 HBOTs: Global improvement - cognition, clarity of thought, conversation, sleep structure, headaches, reading, no further suicidal thoughts, endurance/balance/ left side numbness/strength all improved. Has improved from 30% to 70% back to normal.
- Decreased Lunesta/Percocet, off Provigil.
 - Lunesta: \$225/mo retail, Percocet \$108/mo retail, Provigil \$360/mo retail (Giant Pharmacy)
- Patient symptoms: Generalized improvement.