

Anastomotic Ulcers in Crohn's Disease

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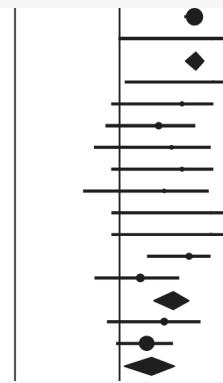
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Hyperbaric Therapy in Crohn's Disease



- Reduces hypoxia, increases antioxidant enzyme activity and reduces proinflammatory cytokine release
- Most studies in perianal and fistulizing Crohn's disease and inflammatory pouch disorders
 - Significant variation in protocols -> 2-3 ATA dives, 90-120 min for up to 40 sessions
- Response rates between 65-90%
- 15% rate of adverse events, mainly barotrauma and myopic vision; <1% tympanic membrane perforation
- Prior RCT in UC → clinical and endoscopic response in hospitalized patients with 5 days of HBOT

		Grigor'eva 2011	0.86	0.81	0.90	208 / 242
	Agrawal, 2015	0.94	0.50	1.00	8 / 8	
		0.86	0.81	0.90		216 / 250
Perianal fistulas	Agrawal, 2015	0.95	0.53	1.00	9 / 9	
	Iezzi, 2011	0.80	0.46	0.95	8 / 10	
	Feitosa, 2016	0.69	0.43	0.86	11 / 16	
	Colombel, 1991	0.75	0.38	0.94	6 / 8	
	Lavy, 1994	0.80	0.46	0.95	8 / 10	
	Piotrowicz, 2017	0.71	0.33	0.93	5 / 7	
	Weisz, 1997	0.94	0.46	1.00	7 / 7	
	Fahad, 2020	0.94	0.46	1.00	7 / 7	
	Hasan, 2020	0.83	0.63	0.94	20 / 24	
	Lansdorp, 2020	0.60	0.38	0.79	12 / 20	
		0.75	0.66	0.83		93 / 118
Pouch disorders	Fahad, 2020	0.71	0.44	0.89	10 / 14	
	Hasan, 2020	0.63	0.48	0.76	29 / 46	
		0.65	0.52	0.76		39 / 60



McCurdy J, Siw KCK, Kandel R, Larrigan S, Rosenfeld G, Boet S. The Effectiveness and Safety of Hyperbaric Oxygen Therapy in Various Phenotypes of Inflammatory Bowel Disease: Systematic Review With Meta-analysis. Inflamm Bowel Dis. 2022 Mar 30;28(4):611-621. doi: 10.1093/ibd/izab098. PMID: 34003289.

Dulai PS, Raffals LE, Hudesman D, Chiorean M, Cross R, Ahmed T, Winter M, Chang S, Fudman D, Sadler C, Chiu EL, Ross FL, Toups G, Murad MH, Sethuraman K, Holm JR, Guilliod R, Levine B, Buckey JC Jr, Siegel CA. A phase 2B randomised trial of hyperbaric oxygen therapy for ulcerative colitis patients hospitalised for moderate to severe flares. Aliment Pharmacol Ther. 2020 Sep;52(6):955-963. doi: 10.1111/apt.15984. Epub 2020 Aug 3. PMID: 32745306.

Hyperbaric Therapy for Anastomotic Ulcers



- Case 1: 54 yo M s/p right hemicolectomy for malignancy, had refractory bleeding and anemia from anastomosis bleeding despite multiple years of medical and endoscopic treatment
 - Received 30 sessions HBOT over 6 weeks, colonoscopy at HBOT completion showed healing
- Case 2: 47 yo M s/p LAR with ileostomy for malignancy, developed anastomotic leak and ischemia 17 days post-op
 - Received 11 sessions HBOT over 3 weeks, had endoscopic healing at two months and ileostomy was closed



Before HBOT



After HBOT

Pateria P, Chong A. A recurrent, ischaemic ileocolonic anastomosis ulcer refractory to surgery treated with hyperbaric oxygen. *Diving Hyperb Med*. 2018 Sep 30;48(3):194-196. doi: 10.28920/dhm48.3.194-196. PMID: 30199892; PMCID: PMC6205864.

Sanzi M, Aiolfi A, Marin JN, Darawsh AEH, Bona D. Hyperbaric oxygen treatment for late low colorectal anastomosis ischaemia: Case report. *Diving Hyperb Med*. 2021 Mar 31;51(1):116-118. doi: 10.28920/dhm51.1.116-118. PMID: 33761553; PMCID: PMC8313769.