

HYDROGEN GAS INHALATION IMPROVED INTESTINAL MICROBIOTA IN ULCERATIVE COLITIS: A RANDOMIZED DOUBLE-BLIND PLACEBO-CONTROLLED TRIAL

Akihito Nagahara

UEG Week Copenhagen 2023

Poster

IBD

October 15, 2023

A randomized double-blind pilot study of 10 active ulcerative colitis patients found that 8 weeks of daily hydrogen gas inhalation was safe and showed trends toward improved clinical remission and increased intestinal microbiota diversity compared to placebo air inhalation.

KEY POINTS

- In the hydrogen inhalation group (5 patients), the Mayo score decreased from 4.6 ± 1.4 to 3.0 ± 1.3 with 3 of 5 patients achieving remission, compared to a decrease from 5.0 ± 1.4 to 3.8 ± 1.5 with 1 of 5 achieving remission in the placebo group, though differences were not statistically significant.
- No adverse events occurred during the 8-week inhalation protocol in which participants inhaled 5-6% hydrogen gas or placebo air for 4 hours daily.
- Hydrogen inhalation was associated with trends toward increased alpha diversity (Chao1 index, $p=0.12$) and shifts in beta diversity ($p=0.35$), with increases in *Gordonibacter* and decreases in *Clostridium ramosum* and *Schalia odontolytica*, while no microbiota changes were observed in the placebo group.
- The authors acknowledge important limitations of small sample size and single-center design, and conclude that hydrogen inhalation may represent a potential therapeutic option for ulcerative colitis warranting further investigation.

VIEW THIS CONTENT ON GUTFLIX

<https://gutflix.eu/search/d/0e91d4ea-743c-11ee-821c-0242ac140004>



AI-generated summary

This summary was generated by an AI large language model based on the content transcript. It is for informational purposes only and should not be considered a substitute for clinical judgment. Always rely on your professional expertise and the full clinical context when making clinical decisions.