Complementary and Alternative Medicine in Inflammatory Bowel Disease

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What Is CAM?

• Definition: Complementary and alternative medicine is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine\(^1\)
• **Alternative** if used in place of conventional treatments
• **Complementary** when used together with alternative treatments

\(^1\)U.S. National Library of Medicine
Is Anyone Else Doing This?

• YES!

• Patients with IBD are reported to use CAM at a rate of 20-60%\(^1\)

\(^1\)Langhorst, Journal of Crohn’s and Colitis, 2015
Topics

- Mind-body (brief)
- Acupuncture
- Turmeric
- Aloe
- Fish Oil
- Cannabis

Disclaimer: There are many potential therapeutic options available. This list is by no means exhaustive, but represents some of the most commonly used therapies. Please discuss planned and ongoing therapies with your/your child’s physician so that we can know and plan appropriately.
Mind-Body

- Mind-Body Interventions:
  - “Techniques designed to facilitate the mind’s capacity to affect bodily symptoms and functions”¹

- Examples:
  - Psychotherapy, relaxation techniques, mindfulness-based therapies, biofeedback, yoga, hypnosis

¹Yeh, Children, 2017
Mind-Body: Why Might This Help?

• Your brain and gut are intimately connected; this is not a one-way connection (they feed back to each other)
• There is evidence that patients with IBD who have lower stress levels have fewer flares\textsuperscript{1}
• Animal models also demonstrate the role of stress on the gut
• If interested in mind-body approaches, we can help! Talk to us about Dr. Jerson

\textsuperscript{1}Bitton, Gut, 2008
Yoga

• Mind-body technique that combines physical maneuvers with breathing techniques and meditation
• There is data that yoga can be helpful in irritable bowel syndrome (which can overly IBD)
• Small study of 100 IBD patients demonstrated improvement in symptoms using yoga (8 weeks 1 hour/day, used in addition to standard medical therapies)\(^1\)

\(^1\)Sharma, International Journal of Yoga Therapy, 2015
Acupuncture & Moxibustion

- Acupuncture: placement of thin needles into the skin at acupoints (specific known points on the body)
- Moxibustion: moxa sticks are either lit and held over a patient’s skin or cones are lit and placed on herbal cakes on a patient’s skin
- Most literature in IBD uses a combination of acupuncture and moxibustion
- Meta-analysis including studies in other languages found 43 trials, taken together evidence that acupuncture and moxibustion superior to sulfasalizine¹
- RCT of 77 patients with mild/moderate CD demonstrated that acupuncture and moxibustion improved symptom and endoscopic scoring compared to sham treatments²

¹ Ji, Evidence Based Complementary and Alternative Medicine, 2013
² Bao, World Journal Gastroenterology, 2014
Turmeric and Curcumin

• Turmeric is a plant in the ginger family, curcumin is the major active ingredient and gives the root its yellow color
Turmeric/Curcumin

- Ulcerative colitis: 50 patients on mesalamine with continued symptoms, added 3 g/day of curcumin
  - Superior to placebo in induction of remission, decreased mucosal inflammation on endoscopy\(^1\)
- Ulcerative colitis, not active: 84 patients on mesalamine or sulfasalazine, 1 gm 2x/day
  - Improved maintenance of remission (? Durability in 6 month follow up)\(^2\)
- Pediatric IBD: 11 patients with CD or UC received curcumin, tolerated well and reported symptom improvement\(^3\)

\(^1\)Lang, Clinical Gastroenterology and Hepatology, 2015
\(^2\)Hanai, Clinical Gastroenterology and Hepatology, 2007
\(^3\)Suskind, Journal of Pediatric Gastroenterology and Nutrition, 2013
Turmeric/Curcumin: the downsides

• Studies use pure preparations of curcumin; use care when purchasing curcumin, as some formulations can contain additives

• Special care when using spices (as opposed to supplements) as can have high levels of contamination with insect parts

1Lewis, Gastroenterology, 2017
2ConsumerLabs.com
Potential Harms with Turmeric

- Interactions: Can increase levels of sulfasalazine\(^1\), tacrolimus\(^2\)
- Can decrease sperm motility and density
- Iron deficiency: animal research suggests that higher levels of curcumin may prevent iron absorption, though this has not been demonstrated in humans\(^3\)
- Has antiplatelet effects (interferes with blood clotting); use with caution in surgery\(^4\)

\(^1\) Kushuhara, British Journal Pharmacology, 2012
\(^2\) Nayeri, Transplant Proceedings, 2017
\(^3\) ConsumerLabs.Com
\(^4\) Shah, Biochemical Pharmacology, 1999
Aloe: the upsides

• Study done in 2004 on 44 outpatients with ulcerative colitis¹
  – Received oral aloe vera gel or placebo 100 mL twice a day x4 weeks
  – Patients demonstrated clinical improvement/remission at increased rates with aloe vera compared to placebo
  – Improved findings on endoscopy as well
  – Study did not have any reported serious adverse events

• Further testing in humans has not been published

¹Langmead, Alimentary Pharmacologic Therapy, 2004
Aloe: the downsides

- Different products: aloe vera gel and aloe vera juice
- Aloe vera juice contains aloe vera latex, which has a strong laxative effect and can cause diarrhea
- Use caution in selecting a product as many different products differ by type of aloe, part of aloe leaf used, and amount of purification; Consumer Lab found that many products do not contain what they claim to contain\(^1\)

\(^1\)ConsumerLabs.com, Aloe Supplements
Fish Oil

• Found predominantly in oily fish or commercially produced capsules
• Omega-3 polyunsaturated fatty acids are thought to be anti-inflammatory
• Crohn’s disease studies:
  – No difference in rate of relapse on fish oil in large studies (2 large studies with 363 and 375 patients)\(^1\)
  – Smaller study of 78 patients who were not taking other therapies, fish oil prevented relapse\(^2\)
• Ulcerative colitis: smaller, more heterogeneous studies, some with reported benefits and some without\(^3\)

\(^1\)Feagen, JAMA, 2008
\(^2\)Belluzzi, New England Journal of Medicine, 1996
\(^3\)Cheifetz, Gastroenterology, 2017
Fish Oil: The Downsides

• May make it harder for blood to clot (use with caution prior to endoscopy, surgery)
  – Generally seen above 3 gm/day\(^1\)

• High doses have the potential to suppress the immune system\(^2\)

\(^1\)Zucker, Atherosclerosis, 1988
\(^2\)Fenton, Prostaglandins, Leukotrienes, and Essential Fatty Acids, 2013
Cannabis

• Perception of risk is low:
  – 60% of high school seniors responded that they did not view regular use of cannabis as having great risk¹

• In a recent pediatric study, 30% of pediatric IBD patients reported ever using cannabis²
  – National data: roughly 40% of kids use cannabis

¹Kann, Morbidity and Mortality Weekly Report, 2014
²Hoffenberg, Journal of Pediatric Gastroenterology and Nutrition, 2013
Cannabis

• 2 main active ingredients:
  – THC (tetrahydrocannabinol): primary psychoactive
  – Cannabidiol (CBD): largely nonpsychoactive

• Plant is composed of stem, leaves, nodes and male or female flowers; depending on which parts of plant are utilized different chemical composition

• Edible forms may be absorbed differently than inhaled forms and effects may be delayed

Hoffenberg Journal of Pediatric Gastroenterology and Nutrition, 2017
Role of Cannabis in IBD

• Animal models show that activation of the cannabinoid receptors can decrease colitis\(^1\)
• Patients with Crohn’s disease using cannabis reported improvement in symptoms and ability to work\(^2\)
  – No objective measures
• Controlled trial of marijuana use by patients with Crohn’s (21 patients) reported improved symptoms with marijuana, but had no change in levels of CRP, and most (19/21) were able to tell if they were getting placebo or drug\(^3\)

\(^1\) Wallace, Journal Physiology and Pharmacology, 2013
\(^2\) Lahat, Digestion, 2012
\(^3\) Naftali, Israeli Medical Association Journal, 2011
Cannabis: ? Potential Harm in IBD

• Questionnaire-based study out of Calgary
• 56 patients surveyed responded that they had used cannabis
  – Patients perceived improvement in symptoms of abdominal pain and diarrhea
  – However patients who used cannabis were more likely to need surgery for their IBD than patients who did not

Storr, Inflammatory Bowel Disease, 2014
Other potential concerns with Cannabis

• Brain development: Increased literature that adolescent exposure to cannabis use can affect the developing brain
  – Adolescents with cannabis use have decreased frontal cortical volume on MRI and increased impulsivity\(^1\)
  – Persistent cannabis use is associated with cognitive decline, worse for people who started using cannabis before age 18\(^2\)
    • 1037 people followed from birth to 38 yrs

\(^1\)Churchwell, Frontiers in Psychology, 2010
\(^2\)Meier, Proceedings of the National Academy of Sciences, 2012
Take Home Points

- We want to partner with you! Knowing what you are taking/doing is an important part of caring for you/your child
- We may not always ask the right questions: if you feel that something is important, please bring it up
- All treatment options have benefits and risks. Discussion of potential risks and benefits is an important part of caring for you/your child
Questions
Thank You!

About Connecticut Children’s Medical Center
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