Complementary and Alternative Treatments for Inflammatory Bowel Disease

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Goals
• What is CAM/IM?
• Treatment philosophy
• Approach to IBD
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What is CAM/IM

- Broad Categories
  - Conventional Med
  - Nutrition/Diet
  - Exercise/Physical Activity
  - Whole systems (TCM, Ayurveda, Naturopathy, Homeopathy)
  - Botanical med
  - Energy Medicine (Reiki, Healing touch, Qigong etc)
  - Supplements
  - Spirituality
  - Manual Medicine (OMM, Chiropractic, Massage, PT, Zero balancing, reflexology etc)
  - Mind-Body Medicine (Hypnosis, Biofeedback, Guided imagery, Creative therapy etc)

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Are people using it and how much?

- For GI issues, studies with >50% of all patients using some form of CAM.
  - Langhorst et al. Inflammatory Bowel disease 2005
  - Barnes et al Nat Health stat reports 2008
- Patient driven changes in medicine. Physicians now need to learn, understand and be less judgmental of CAM/IM in order to work with patients.
  - Manitoba Inflammatory Bowel Cohort 2011
    - 74% used CAM at some point, 49% at multiple points over 54 months and ~15% at every point.

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Treatment Approach

- Multi-level approach
  - First: Dealing with the acute illness. IE what we can do to help treat the disease or manifestation of the disease right now.
  - Second: Decreasing long term aspects of the disease. IE preventing flares, decreasing long term needs/dosages of meds
  - Third: Change from a disease to wellness model. All patients have more wellness than disease!
    - Increase wellness to decrease disease. We all get something, what do you do with it? Change from disease to a gift!
  - Fourth: Helping to decrease/manage med side effects. IE sleep issues with steroids, liver toxicity etc.
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Basic Principles

- Nutrition
- Exercise
- Stress Reduction

Mind, Body and Spirit Approach

Underneath all treatment modalities, these are the basic principles for all patients. If we can simply do these, we will improve the patients quality of life.

Complexity vs reduction thought.

Wellness vs disease model

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IBD Treatments

- Nutrition
  - Interesting dilemma.
  - IBD is an inflammatory disease.
  - Certain dietary intake can increase inflammation (Omega 6 FA, trans fats, high saturated fats, high glycemic load etc)
  - Certain diets associated with less inflammation (Mediterranean, Anti-inflam, Okinowan). High in Omega 3, low trans fat, high monounsaturated fat, plant based diet.
  - Commonly a low residue diet recommended for IBD, how do we do both? The low residue diet is almost directly the opposite of the anti-inflamm

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Nutrition cont.

- IM dietitians: recommend avoiding foods that cause flares but focus on anti-inflammatory diet, feel there is little evidence for low-residue diet.

- Practically, patients report clear flares from certain foods.

- Therefore, I recommend
  - Increase anti-inflammatory fats (e.g., olive oil, fish twice a week and supplement with omega 3’s (see further discussion)
  - Cook foods down if needed, avoid raw veggies, watch skins and eat fruits/vegetables that are very colorful (phytonutrients).
  - Other evidence related to elemental diets and pre-diagnosis diet and incidence of disease.
Supplements

• Omega 3 fatty acids.
  – Anti-inflammatory pathway
  – May have both a local and systemic effect
  – Recent review (2006) w/ possible better outcome from enteric coated.
  – Long term risk of GI cancer: Significant decrease risk with fish intake. (Again the issue of plant-based diet vs low residue)
  – Dose: Start at ~2 gms/day and increase to 4-6 if tolerated. Freeze caps if "burpy".

Supplements

• Omega 3 Fats: fish oils, flax, walnuts, eggs of flax fed hens
  – Inhibit cyclo-oxygenase and 5-lipoxygenase, decreased release of cytokines IL-1 beta and TNF-α
  • Godberg RJ: Pain 2007 (efficacy of Omega 3 in inflammatory arthritis)
  – ~25% of IBD patients with EFA deficiency
  • Siguel et al Metabolism 1996

Supplements

• Early animal studies suggested fish oil supplements helped in IBD (Vilaseca 1990, Empey 1991)
• Small human studies with some benefit
• Cochrane review in 2009 for CD
  – 6 studies for criteria, some improvement, heterogeneous, safe
• Cochrane review in 2007 for UC
  – 3 studies for criteria, none with enteric coated, unable to draw conclusion
FAP: 22-30% decrease in polyp number and size over 6 months, vs increase in number and size in control group
- West et al Gut 2010

Enteric coated:
- 2005, 38 children with Crohn’s, placebo control, statistically lower relapse rate in patients receiving omega 3.
- 1996, NEJM, ~ 80 CD patients, placebo controlled, decreased relapse rate in treated group.

Other Supplements
- Aloe Juice or Gel
- Glutamine
  - Big dose-7gms 2-3X/day helps in enterocyte repair, effective in other settings (chemo)
- Phosphatidylcholine (Lecithin)
  - Recent study with significant improvement in refractory patients

Probiotics
- More and more interesting work looking at not only the bacterial flora but the whole immune-modulating effect.
- With IBD: suspected disruption of microflora which has impact on local gut health.
- Very good side effect profile.
- Primary Probiotic studied
  - VSL 3. Very high doses - billions to trillions CFU’s have been effective.
  - Would recommend probiotics for long term GI health even if not for acute treatment.
Exercise: Critical

- Yoga/Tai chi/Walking/Martial arts
  - Recommended non-competitive exercise with focus on wellness even if competitive athlete. Helps to “take back control”, focus on health, stress reduction, moving meditation.
  - Other cultural systems place big emphasis on GI tract, wellness stems from health GI tract “not just eating and pooping”
  - Thus, much of yoga and tai chi focus on improving GI function and recognizing wellness.
  - Taneja et al Appl Psychophys Biofeed, 2004 in IBS
  - Birdee et al Acad Pediatr 2009 Review of yoga in pediatrics
  - Evans et al Trials 2011 Starting trial of yoga with IBS
  - Kuttner et al Pain Res Manag 2006 IBS
  - Improve gut motility
  - Improve overall health
  - Decrease side effects of meds (fatigue, bone disease, weakness, hypertension, weight gain etc)
  - Start off very slow (deconditioning effect) and pick something you like.

Botanicals

- Aloe Vera
- Ashwagandha - adaptogen, anxiolytic
- Boswellia (leukotriene inhibitor): asthma/arthritis
- Chamomile: anxiolytic
- Licorice
- Meadowsweet: arthritis
- Oregano: antimicrobial
- Slippery Elm
- Turmeric
- Wild Yam: previously known as “colic root”/antispasmodic

Turmeric

- Reports of ~20-25 NIH studies using Turmeric as anti-inflammatory herb.
- Common spice for >1000 years.
- Active components: Polyphenolic curcuminoids-curcumin
- Also commonly recommended for arthritis and asthma.
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- **Turmeric**
  - Anti-inflammatory properties
  - May help with long term cancer risk (decrease in polyps in patients with FAP)
  - Take without fat to avoid absorption (more absorption with have systemic effect and may be good for systemic manifestations)
  - 1200-1800 mg curcuminoids 4-6 gms/d turmeric likely need extract to get this dose. Long term health may benefit from adding turmeric to cooking.

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**Turmeric cont**
- Holt et al Dig Dis Science 2005
  - Pilot study: 5 pts with UC, 5 CD; 9/10 improved
  - UC all 5 clinical improvement, 4/5 decrease in meds
  - CD 4/5 lower CDAI improved and decrease ESR
  - UC, ~90 patients, blinded placebo controlled
  - 4% relapse with curcumin, 20% placebo
  - Statistically significant decrease in clinical activity index and endoscopic index in curcumin group

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- Dosing: 500-2000 mg/day of Curcumin
- Note: For systemic inflammation needs fat and/or piperine (pepper) to be absorbed.
- Need supplement: not enough curcumin/Turmeric concentration to get dose needed.
**Turmeric cont**

- Cancer: long term concerns in IBD
  - Small number of patients treated with Turmeric+quercitin: 50-60% decrease in size and number of polyps
- Murphy et al. *J Interferon cytokine research* 2011
  - ApcMin+ mice: decreased polyps by 75% with decrease in inflammatory marker expression.
- Villegas et al. *Int J Mol Nutr Food Research* 2011
  - Mouse model with dextran sodium sulphate induced colitis: protective/preventative effect on progression of colorectal cancer associated colitis. Reduction in overall inflammatory protein expression.
- Numerous studies looking at the anticancer effect of curcumin in the colon.

**Boswellia (Indian frankincense)**

- Leukotriene inhibitor-anti-inflammatory.
- Comes from a tree in India
- Gum resin made into a standard extract
- Common CAM modality for asthma.
- 300-1200 mg tid

**Licorice**

- Historically known for its GI protective and anti-inflammatory effect
- Inhibits enzymes that metabolize prostaglandins E1 and F2
- Anti-ulcer effect similar to famotidine
- anti-H Pylori flavanoids
    - Flavonoids inhibited h.pylori growth
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- Safe in healthy adults when less than 1-3 grams/day used, lower dose if over 3-4 weeks.
- Glycyrrhizin is the part that causes HTN, sodium retention: IE pseudohyperaldo.
- DGL (deglycyrrhizinated licorice) dose not cause these issues.
- When taken with NSAID/ASA, decreases gastric mucosal damage
  - Russel et al Scan J Gastro 1984

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**Wormwood (Artemisia)**

- Omer et al Phytomedicine 2007
  - 40 patients with CD, randomized placebo controlled, (90% treated with improvement and steroid taper 65% complete remission, none with placebo)
- Krebs et al (same group) Phytomedicine 2010
  - Improved CDAI and lower TNF alpha with wormwood as compared with controls.

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**Mind-Body Techniques**

- Hypnosis/Guided Imagery/Biofeedback
  - I primarily use for pain management
  - Recent reviews on abd pain in children showed hypnosis to be effective
  - Preliminary data show changes in inflammatory markers locally with hypnosis.
- STRESS REDUCTION
  - Stress is more and more being seen as an important component of systemic inflammation
Whole Systems

- Homeopathy - like cures like
  - Small doses of a compound that would give similar symptoms at higher doses is given (sometimes called inositol)
  - No good data in IBD but minimal risk.
- TCM
  - Primarily acupuncture (and its components) and herbal regimens along with certain exercises (Tai Chi, Q Gong). Improving the chi.
  - Increasing evidence of acupuncture helping with abdominal pain.
  - Intestines are a very major organ system in TCM that is viewed to interact closely with other systems.
  - There are needle-less forms for children.
  - Careful of contaminants in herbal preps.
- Ayurvedic and Naturopathy: Excellent systems with a very holistic approach.

Energy Medicine

- Working with energy fields and chakras to help in overall wellness.
- Some spiritual healing falls in this category (IE shamanic healing)
- I have used more for acute pain/anxiety but can be used for long term wellness.
- Sometimes a difficult concept until one experiences it.
- Reiki, healing touch etc

Manual Medicine

- Osteopathy
- Chiropractic
- PT
- Massage
- Reflexology

No clear studies to improve IBD but experience has shown us it can be effective in treating pain, and referred viscerosomatic responses.
Stress Reduction

• Life is stressful and exponentially for patients with a chronic illness. Should recognize and not ignore this component
  – Treatment options are many
    • Breath work (Almost universal in all medical cultures but ours!)
    • Meditation
    • Yoga, Tai Chi, Qi Gong (moving meditation)
    • Exercise (not competition)
    • Counseling
    • Spirituality/Prayer
    • Energy Medicine

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What are we doing?

• Wellness based approach: increase wellness, decrease disease.
• Our goal: all patients will have access to integrative care to improve outcome.
• Integrative approach in all areas of pediatric care: inpatient, outpatient, PICU, NICU, ER, Radiology.

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Developing/Current Programs

• Subspecialty care: patient entering any program has access to integrative guidance approaches. Work closely together and coordinate visits
  – Currently hypnosis in Pulmonary and urology
  – Biofeedback with PT for voiding issues
  – Headache program with NP integrative approach
• IM consults for patients and practitioners: connects patients to all therapies and practitioners: kid friendly
  – At visit OMM, biofeedback, mind body
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- Inpatient: IM consults, OMM, mind body, biofeedback, some supplements
- Developing
  - OMM for all ages and more access
  - Music therapy
  - Reiki/Energy medicine
  - Acupuncture
  - More mind body
  - Supplements/botanicals

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- Greening the hospital
- Nutrition: already in place but looking at teaching cooking, more “food as specific therapeutic intervention”.

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Clear Commitment

- Three (3) physicians heading to Univ Ariz to do fellowship
  - Mark Integlia, MD - Pediatric GI
  - Holly Neefe, MD - General Pediatrics
  - Denise Toshach, MD - Pediatric Hospitalist
• The diagnosis and treatment of the disease should not be worse than the disease itself.
• The price of liberty is eternal vigilance.
• If you simply look at the single leaf of the tree, you miss the beauty of the thousand leaves.