

# Low Dose Naltrexone Treatment for Crohn's Disease

Paul Battle PA-C

Grossman Wellness Center

Golden, Colorado

[pabattle@outlook.com](mailto:pabattle@outlook.com)

# Paul Battle's Life Activities

- Member of the Crohn's and Colitis foundation
- Owner of Healing Crohn's and Colitis consulting company
- Physician Assistant 11 specialties in 32 years  
Physiologist
- National and International lecturer on osteoporosis, LDN, neurostimulators.
- Medical consultant to Biotech Company
- No conflict of interests with subject matter

# Take Away Points

- Become familiar with Crohn's Disease
- Understand the Current Therapies
- Know why LDN should be a consideration in Crohn's disease in some patients

# What is Crohn's Disease

- 1 of 2 major inflammatory bowel diseases not to be confused with irritable bowel
- 1.3 million US citizens, 50,000 children
- Can be severely disabling, Lower incomes
- May involve any place in the GI tract. Ulcerative colitis is the other IBD that only involves the colon. (curable with colectomy)
- Transmural can cause fistulas, strictures, abscesses.



Discrete Ulcer



Cobblestone



Stricture  
(Narrowing)

with infliximab

Before treatment



Week 10 after  
3 dose induction



# Crohn's Symptoms

- Tender abdominal pain
- Fever
- Weight loss
- Childhood stunting of growth
- Diarrhea
- Fatigue

# Laboratory findings

- Anemia low Hgb/Hct (blood loss)
- Low protein due to poor absorption
- High C- reactive protein
- High Sedimentation Rate
- Positive hemocult (blood in stool)
- Upper and lower endoscopy changes



# What went wrong to develop Crohn's

- Dysregulation of Innate immune system
- Low endorphins MS, Crohn's, RA according to Dr. Gironi In Milan. Beta endorphins downregulate IL6, IL12
- Increased relative activity of TnF, NfKb, IL6, IL12, reduced IL10
- Patients with IL10 mutation early Crohn's
- Proteins pass by tight junction (one cell layer thick) ignite immune response
- Glocker et al, N. Engl J Med 2009 361: 2033-2045
- Gironi et al, Arch Neurol 2000, Aug 57 (8) 1178-81

# More on how does Crohn's develop

- Gluten, casein may form opiate like peptides that bind to the opiate receptors, thus causing more dysregulation on the tissue level and central nervous system.
- Gluteomorphins and casomorphins

# Current traditional therapies

- Corticosteroids: AVN, DM, Cataracts, superinfections, wt gain
- Azathioprine, 6MP: skin cancer, fatal T cell lymphomas, 3-4x risk but still rare.
- Aspirin based products: gi bleed
- Elemental diet.

# Biologic Agents Tnf inhibitors

- Blocks Tnf-alpha that reduces inflammatory cytokines and response
- Infliximab IgG mouse 75%, human 25% IV infusion \$3000-\$6000
- Adalimumab recombinant Human 100% SQ injection
- Significant disease modification
- 38% remission with adalimumab 12% placebo
- Hanauer SB, etal Gastroenterology 2006: 130 (2) 323

# Infliximab

- 30.1% mucosal healing
- Side Effects: 25% fungal infection mortality, 3-5x risk of T cell lymphomas (young men mostly), overwhelming infections
- Allergic reactions which make ineffective
- Risks increase with use of other immunomodulators
- Columbelle Jf et al, NEJM 2010

# Low Dose Naltrexone Effects

- Increases IL10, Igf-B, transforming growth factor, and NK cells (natural Killer)
- Inhibits Tnf, TH-17, IL6, IL12
- Mice study with Murine IBD reduced IL6, IL12, to normal level reduced wt loss
- Increase endorphins 2-3 fold with AIDS patients
- Bihari B, Enkaphalin in treatment of AIDS-related complex. 1999
- Matters GL et al, Naltrexone improves murine IBD, Journal Immunotoxicology, 2008 Apr; 5(2) 179-187

# Published studies on LDN

- Jill Smith 40 patients severe Crohn's 4.5 mg naltrexone 12 weeks: 89% favorable response, 30% remission. Endoscopic improvement 48% LDN, 0% placebo, 33% remission 8% placebo complete remission 22% 0 placebo, increase to 50% remission after another 12 weeks
- Smith JP, et al Safety and tolerability of LDN therapy in Children with moderate-severe Crohn's J. Clin Gastroenterology 2013 Apr; 47(4) 339-45

# More LDN papers

- LDN 69% remission 89% responded, Smith JP,
- Blocks acute endotoxic shock with Tnf inhibition
- Increases Nk cells
- Naltrexone blocks Nk cell buprenorphine suppression.
- Smith JP, et al Low Dose Naltrexone Therapy Improves Active Crohn's Disease, American Journ Gastroenterology, 102 No. 4 (2007); 1-9
- Greenelch KM, et al, Brain Behavior Immun, 2004, Sept; 18(5):476-84
- Boyadjeva et al, Naltrexone disrupts NK cell inhibition, Journal Immuno 2004 , 173:42-49



# One Patient Experience

- 45 year old woman hx breast cancer
- Crohn's for about 10 years small bowel resection 2013
- Email: Hello Paul, I am doing well. While Dr. # was not a big fan of LDN in the past, she cited Dr. Smith's study talking about the impressive results of my colonoscopy. No evidence of recurrence. Here are the pictures I only dreamed about.

Image 204



Image 205



# Drugs are not the only answer to Crohn's

- Vitamin D3: inhibits NOD gene, increases AMP, reduces Tnf, tight junction proteins
- Omega 3FA inhibit inflammation
- Probiotics: immunoregulation of the gut microbiome 300 species 100 trill.
- Dietary changes: gluten, casein
- Glutamine to feed the enterocytes and cell synthesis

# Summary

- Crohn's has significant disability and suffering that can affect anywhere in the GI tract
- Many therapies: steroids, 6MP, azathioprine, ASA, biologics but have inherent risks and can be costly.
- LDN may be just as effective but \$40/mo, no serious side effects. May be considered primary or after initial failure.