

Synbiotic Therapy in the Fight Against C. Difficile

Antibiotics, the popular fighters against bacterial infections, have seen a constant high popularity since their inception. However, with this great treatment comes a price: growing resistance to antibiotics. More and more diseases are becoming multi drug resistant, meaning that no current antibiotics work on the disease. One example of this is Clostridium difficile infections.

C. difficile is a potent bug that causes problems in the gut that ultimately result in antibiotic resistant diarrhea coupled with a high fever. In some cases, colitis can occur as well which is basically bowel inflammation. Patients with a C. diff infection have frequent and severe diarrhea that often cannot be treated with the standard antibiotics. The diarrhea can start as late as 2 months after antibiotic use. The infection can range from mild to deadly if not treated immediately and properly. The infection is most likely to occur in hospitals or nursing homes. This infection is contagious if proper hygiene guidelines are not followed. Hands must be thoroughly washed and the surrounding area must be thoroughly cleaned with bleach. However, healthcare facility employees do not always follow this hygiene regimen properly which leads to the spread of the infection.

Not only is it easily spread, but it has also worsened in recent years. Normally the bacteria produces two toxins, Toxins A and B, however it has gone on to develop a third, Toxin CDT. This toxin works together with Toxins A and B to increase the potency of the infection. It does this by increasing the bacteria's virulence. This makes it even more difficult to kill off the infection. The growing use of antibiotics only helps to contribute to this issue.¹

According to the 2017 Infectious Diseases Society of America C. difficile guidelines, the current recommended therapy for C. diff is Vancomycin or Fidaxomicin. Vancomycin is recommended for first episodes, severe episodes, and recurrent episodes of C. diff. Fidaxomicin is recommended for first episodes and recurrent episodes of C. diff.²Antibiotics which are useful can do more harm than good in the case of C. diff infections. Antibiotics are made to destroy bacteria, but they indiscriminately kill everything, meaning they kill good and bad bacteria. Since the friendly bacteria are killed off, there is a reduced number of good bacteria, which gives the C. diff bacteria more space allowing it to grow leading to C. diff overgrowth. This overgrowth happens fairly quickly as 100 trillion microorganisms, 400 to 1500 species, are constantly competing for space every 20 to 40 minutes or 72 times a day!

Now there is a solution to this problem in the form of synbiotic therapy which consists of prebiotics and probiotics. Probiotics help increase the amount of friendly bacteria in your gut so that it overtakes the bad bacteria. The aim is to tip the balance in favor of the friendly bacteria. By taking the probiotic you would get more of bifidus, "the number 1 microbe"³, in your gut. By taking the prebiotic you would multiply the amount of bifidus in your gut by a factor of 5. Together they work to occupy more space in your gut than the C. Diff bacterium. Dr. Kelly Karpa, Ph.D, RPh, discovered this when she was able to treat her son's C. diff episodes with probiotics. Her son had tried all the standard treatments, and nothing worked until she tried using probiotics. Probiotics are what ultimately helped her 2 year old son. Dr. Karpa details her discovery in her book *Bacteria for Breakfast Probiotics for Good Health*.⁴This is not the only evidence of probiotics' success, in 2001 Valley Lutheran Hospital implemented a Florajen 3 protocol for treatment of C. diff. With the implementation of the Florajen 3 protocol, there was a 66% reduction in incidences of C diff infections.⁵The probiotics clearly played a crucial role in the treatment of C diff infections.

Dr. Listecki, at Glen Ellyn Pharmacy, offers his own treatment protocol for C. diff infections, Listecki C. diff Protocols, which uses synbiotic therapy. Dr. Listecki's protocol is as follows:

For C. diff prevention: susceptible patients (over 50 years of age, antibiotic therapy in previous 3 months, or corticosteroid therapy) 1 capsule Florajen Digestion daily on empty stomach with non-chlorinated water, fruit juice, or milk. In addition to Florajen Digestion capsule(s), take a quarter to half a teaspoonful of 95% FOS powder anytime once daily.

For C. diff treatment: Take one to 3 capsules of Florajen Digestion up to 3 times a day or take half a packet to 3 packets of VSL daily and a quarter teaspoonful of 95% FOS powder. Patients can also take one Florastor (saccharomyces boulardii) capsule twice daily.

A side effect of the synbiotic therapy is JHE's (Jarisch – Herxheimer effects) reported in less than 10% of the patients in the first 3-5 days of therapy (rare up to 2 weeks). Patients may experience nausea, mild to moderate headaches, joint pain, sweating, flu like symptoms without fever, malaise, a red rash, skeletal pain, and itching. Less common symptoms include chills, diarrhea (typically of short duration) vomiting of short duration, and fever. These symptoms are actually an indication that the treatment is working and the cause is a protein fragment from disintegrating yeast and fungal cells die off. If these occur stop the treatment for 24 to 48 hours and resume a lower dose.

Other nutritional support: reduce consumption of high glycemic index carbohydrates to minimize infective yeast and fungal overgrowth, which competes with therapy to increase beneficial microorganisms.

Implementing the Listecki C. diff Protocols for C. diff treatment is safe and effective. As Dr. Karpa says, "For those that suffer from chronic persistent C. diff diarrhea, probiotics can be a remarkably successful life-saving therapy."⁴

References:

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