HYPERIMMUNE EGG POWDER FOR THE TREATMENT OF IRRITABLE BOWEL SYNDROME: A CASE SERIES

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ABSTRACT

Objective: To demonstrate the benefits of a hyperimmune egg powder supplement for treating irritable bowel syndrome in 2 patients.

Clinical Features: The first patient, not under chiropractic care, had been diagnosed with irritable bowel syndrome by her primary care physician. She sought care due to failure of several other alternative therapies. Her primary care physician ordered specific dietary modifications, yet this regimen did not appear to improve her symptoms. The second patient, also diagnosed with irritable bowel syndrome by her primary care physician, decided to seek care because the attending physician was concurrently treating her for idiopathic scoliosis, and both treatments could be administered at 1 office visit. Her primary reason for seeking this treatment was her longstanding episodic intestinal cramping and diarrhea. She overheard another patient in the same clinic discussing how the hyperimmune egg powder had alleviated her digestive complaints and decided to undergo a 2-week trial of the hyperimmune egg powder.

Intervention and Outcome: The first subject was given a 31-day supply of the hyperimmune egg powder. She reported significant subjective improvement in frequency of defecation and stool consistency after 48 hours. She kept a daily journal to monitor her bowel habits during the trial period. The second subject was provided a 15-day supply of hyperimmune egg powder and instructed to keep the same daily journal to monitor her bowel habits. During the second week of the trial, she noticed less frequent bowel habits and a more solid stool consistency. However, shortly after she stopped taking the hyperimmune egg powder, the pre-trial symptoms returned. Because of this, she was put back on the hyperimmune egg powder, and the symptoms improved thereafter.

Conclusion: The addition of hyperimmune egg powder into an ordinary daily diet may have improved bowel function in 2 subjects, at least subjectively. However, it is unclear whether the subjective improvements are due to the hyperimmune egg powder or any psychosomatic effect created by physician contact, regardless of treatment type. This study should be re-

peated on a larger scale with a control group before any conclusions are made. (*J Chiropr Med* 2004;3:12-14)

Key Words: *MeSH:* Irritable Bowel Syndrome; Immunization, Passive Immunity. *Non-MeSH:* Hyperimmune Egg

INTRODUCTION

A relatively new whole food supplement has been introduced to the public as a way to balance and support the immune system. This product is based upon hyperimmune egg technology. This supplement is created by repeatedly vaccinating chickens to human pathogens (1). Over time, the chicken's immune system produces IgY antibodies against these human pathogens. When the chicken lays her eggs, the egg contains the immune components to combat these pathogens (1).

The immune components found in hyperimmune egg have been found to inhibit several bacterial processes, such as growth, adhesion to intestinal walls, and toxin production (2). Pimental et al (3) have shown that an overgrowth of intestinal bacteria may be present in 78% of all IBS patients. In this same study, they were able to eliminate the symptoms of IBS in 48% of these patients by eradicating the bacterial overgrowth. In a review by Guarner and Malagelada (4), it was shown that decreased immune function and bacterial overgrowth in the small intestine might lead to such disorders as organ failure, pancreatitis, cirrhosis, intestinal obstruction, and inflammatory bowel disease. This occurs through a process called bacterial translocation, where viable bacteria may pass through the epithelial mucosa of the gastrointestinal tract (5). Because this immune supplement contains antibodies to several common bacteria (*E. Coli*, *Salmonella*, *Klebsiella*, *Staphylococcus*, *Streptococcus*, etc.), as well as its direct intestinal effects, I hypothesized that this immune supplement would help alleviate the symptoms associated with irritable bowel syndrome.

CASE REPORTS

A 49-year-old female sought care after learning about the hyperimmune egg supplement from a family mem-

ber. Her vital signs did not produce any remarkable findings. The patient reported a near daily intake of "fast food" that was high in saturated fat and refined white flour. She reported not being able to eat certain foods such as garlic, onions, salsa, cayenne, whole milk, or citrus fruits. She also explained that she had daily episodic bouts of diarrhea and constipation, depending upon the foods she ate and the time of day. She received a diagnosis of irritable bowel syndrome from her primary care physician about 4 years prior to the beginning of this case study. She said that although her family doctor had prescribed specific diet changes, she had been largely unable to keep to the regimen.

Being that her primary care physicians already diagnosed the problem, I started her on a 31-day supply of the hyperimmune egg supplement in powder form. The patient was instructed to take 1 scoop of powder (4.5g) per day with food or liquid. She was instructed to carefully monitor her bowel habits during the length of the trial, including frequency, volume, consistency, and daily pain and discomfort via a 31-day written journal. She was also instructed not to change her normal eating habits, so that dietary modification could not be considered as a reason for any improvement.

At the end of the trial she was contacted by telephone and a follow-up interview was conducted. She reported a complete elimination of her episodic bouts of diarrhea and constipation after the second day of the trial. By the end of the eighth day, her gastrointestinal pain and discomfort had disappeared. Concerning her bowel movements, she reported her stool being more solid, and that she tended to have larger but less frequent bowel movements. Additionally, after the first week, she started eating the aforementioned foods that normally would aggravate her condition (against my recommendation). She reported that she did not have a single bout of diarrhea over the entire 31-day trial period. She was not managed with manipulative therapy during this trial period. She was ordered to discontinue her regular vitamin and nutritional supplements as well.

In a second case, a 21-yr-old female patient sought care for a 35° left convex thoracolumbar scoliosis. She had been previously treated unsuccessfully by a chiropractor, from which the curve increased in magnitude, and a medical doctor who prescribed oral steroids for the symptoms associated with the scoliosis. At the time of the initial history and exam, she reported no other complaints other than neck and back pain. Her previous records were sent to the attending physicians from the 2 previous physicians who had treated her. A brief physi-

cal exam found no remarkable findings. After hearing about the hyperimmune egg powder from another patient, she informed me that she had been dealing with digestive problems since shortly after being diagnosed with adolescent idiopathic scoliosis (AIS). She reported that she had been diagnosed with diarrhea-dominant irritable bowel syndrome about 4 years prior. She initially neglected to tell me about this condition because she "didn't think chiropractors could help that."

She was prescribed a 2-week supply of the hyperimmune egg powder in individual packets. She was also instructed to maintain a personal journal of her daily bowel habits, paying attention to stool consistency, frequency, abdominal discomfort, and stool volume. Due to her distance from the clinic, she only came once weekly. Therefore, the patient came in once during the 2-week trial of the hyperimmune egg powder. After the first week on the supplement, she reported no significant benefit from taking the hyperimmune egg powder. The next time she reported to the clinic she had been 2 days past the end of the hyperimmune egg powder supply. At this time, she reported to the attending physician that she had a marked increase in the frequency of her bowel movements, as well as distinct change in the consistency of her stools. She reported not having this problem during the 2-week trial. The bowel problems continued through the next week of care, at which time she was placed back on the hyperimmune egg powder. Within 2 days of retaking the egg powder supplement, her bowel habits became less regular and the stools returned to a more normal consistency.

DISCUSSION

Irritable bowel syndrome is a condition that results in chronic alternating periods of diarrhea and constipation. It is the most common gastrointestinal complaint seen in the primary care setting, and accounts for almost half of all referrals to gastroenterologists (6). Irritable bowel syndrome occurs in about 11.5% of the population, (7) with a tendency toward youth and the female gender (8). On average, the symptoms of IBS usually last for 2 hours per day, 7 days per month (7). Irritable bowel syndrome is characterized by symptoms of abdominal pain, bloating, flatulence, and changes in bowel habits (6). However, according to the Rome criteria, both abdominal pain and altered bowel habits must occur before a diagnosis of IBS can be given (9). Typically, conservative treatment for this condition is mainly comprised of dietary and exercise modification, usually avoiding those foods that aggravate the condition. To date however, studies that eliminate certain foods from

the diet as treatment for IBS have not been conclusive (10).

Both of the subjects in the present case reports were still taking the hyperimmune egg powder supplement at the time this article was submitted for publication. Therefore, it is unknown whether the apparent results from taking this supplement would have any beneficial long-term effects. However, as was the case in the second case report, her symptoms returned upon cessation of taking the hyperimmune egg powder. The second patient was concurrently being treated for scoliosis with combined manipulative and rehabilitative therapy. Therefore, it cannot be ruled out that the manual therapy could be at least partially responsible for the subjective improvement in bowel function.

The hyperimmune egg powder has been previously described in *Index Medicus* journals (1,11,12). This product has previously shown significant effectiveness in treating osteoarthritis pain (11), moderating cholesterol levels (12–14), and promoting healthy digestive function (15,16). It is thought that this product moderates cytokine function, a component of the immune system pivotal to the regulation of the inflammatory response. This is thought to occur due to the presence of certain immunoregulatory cofactors found in the hyperimmune egg (17). These cofactors circulate systemically affecting every metabolic (18) and neuroendocrine (19) pathway in the body. Recent literature (20,21) has suggested that specific immunological responses and effects are similar regardless of whether they occur in joints, the gastrointestinal system, nasal mucosa, cardiovascular structures, etc. Therefore, this hyperimmune egg technology has the ability to affect many different disease processes due to the integration of the immune system into most, if not all, bodily functions.

CONCLUSION

Hyperimmune egg technology has been shown to positively moderate digestive function (12–14). In the present study, 2 cases of irritable bowel syndrome appeared to provide at least subjective improvement in each patient's bowel function. This could be due to the improvement in 2 potential causes of IBS: reduction of intestinal bacterial overgrowth, and balancing and supporting proper immune system function. However, this study was not controlled, and the long-term effects of the supplement are currently unknown. No side effects or interactions were reported by either patient. Being

that the immune system has such broad effects on human function, it may be prudent to test this product on many other human ailments associated with chronic inflammation, such as cirrhosis, pancreatitis, pulmonary fibrosis, and glomerulosclerosis. The present study should be repeated on a large number of patients with irritable bowel syndrome before any solid conclusions are drawn.

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