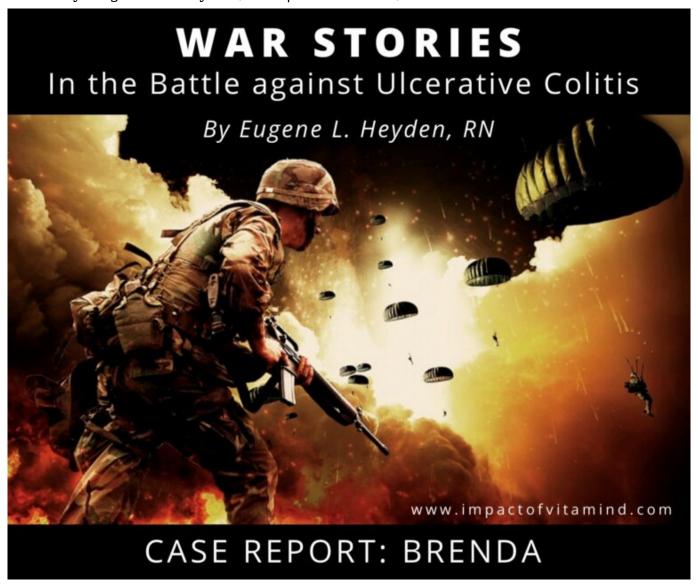
War Stories: Brenda

written by Eugene L. Heyden, RN. | December 6, 2022



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By Eugene L. Heyden, RN

"Immunoglobins are protein molecules that function as antibodies against many pathogenic as well as potential pathogenic microorganisms." ~Rountree, 2002

"SBI is uniquely composed of immunoglobulins which remain biologically active throughout the GI tract and have affinity for common intestinal antigens associated with GI inflammation." ~Detzel et al., 2015

There is an emerging therapy that holds great promise in the battle against ulcerative colitis. The therapy in question is called Serum-Derived Bovine Immunoglobulin/Protein Isolate, or SBI for short. What is this thing we call SBI?

SBI is a high protein dietary supplement that is jam-packed with immunoglobulins, IgG, IgA, and IgM (Detzel et al., 2015). These are some of the same, beneficial ingredients found in breast milk—particularly concentrated in mother's first milk, known as colostrum (Hurley and Theil, 2011). So, perhaps taking clues from this form of therapy (yes, breast milk, colostrum included, is therapy for the newborn baby), a new treatment for IBD has emerged.

I'm not here to gross you out, but I will just a little. Be aware, SBI is derived from the blood of a cow. But likely, so is dinner. If you eat meat, you eat blood. So, relax. Besides, SBI is a highly refined concentrate of the immunoglobulins normally found in blood, whether it be your blood or the blood of the cow. SBI is not a liquid (that will run out of the corners of your mouth). It is a powder. And it may be a miracle.

"So, what does SBI do?" you ask.

"The mode of action for this specially formulated bovine immunoglobulin preparation is multifaceted. SBI binds microbial components, maintains GI immune balance, manages gut barrier function and improves nutrient utilization." (Shafran et al., 2015)

The immunoglobulins in SBI 1) bind bacteria (Van Arsdall et al., 2016), 2) bind bacterial breakdown products (Beauerle et al., 2015), and 3) bind bacterial toxins (Arikapudi et al., 2017)—forming complexes too large to pass beyond the not-so-tight-because-of-disease junctions that exist between neighboring intestinal epithelial cells (Beauerle et al., 2015), and are eventually flushed away. Immunoglobulins, by their actions within the bowel, reduce the immune response required to deal with all the madness. Less immune system stimulation means less immune-cell activation along with an increased opportunity for healing programs to be set in motion and complete their mission. And in all this, SBI reduces the numbers of proinflammatory cytokines that are intimately involved in the disease process, in addition to decreasing intestinal permeability (Pérez-Bosque et al.,

2015). To see it all in action, let's take a look at a case report from a paper written by Beauerle et al.

Case report: Brenda

We'll give this individual the name Brenda. This is her story.

Brenda is 60 years old and experiencing 8 watery, bloody stools per day. And I mean each and every day! In addition, abdominal cramping is a frequent occurrence. Brenda is not happy with any of this.

Prior to the present illness, Brenda had been treated for pan- (all over) colitis, and for the past couple of years she had achieved and maintained remission, thanks to the anti-TNF drug Humira. But things they would change, and not for the better.

Brenda developed a knee infection that required antibiotic therapy to resolve this issue. Due to this unfortunate turn of events, anti-TNF therapy was discontinued. She also underwent multiple surgeries to wash out the infection in her knee. And if that wasn't enough, during all this, Brenda twice developed the enteric (gut) bacterial infection caused by a pathogen known as *C. difficile* (*C. diff*). This is an often-encountered problem associated with antibiotic therapy, and it can kill. Fortunately, Brenda's most recent *C. diff* infection was successfully treated with vancomycin.

Following a successful outcome with her knee infection, Brenda began to experience what was likely a flare of ulcerative colitis. Steroids, prescribed and given in response, failed to reduce her symptoms. Two years prior, Brenda was kept in remission by anti-TNF (biologic) therapy. So, in view of an apparent return of her ulcerative colitis (a test for *C. diff* was negative), restarting anti-TNF therapy was placed under serious consideration. But this time, Brenda wanted none of this.

Apparently, Brenda credited (blamed) anti-TNF therapy for a serious bout of septic arthritic knee and did not want to experience *this* ever again. In view of her previous experience with anti-TNF therapy, and the pressing need for an alternative treatment, Brenda was offered SBI in the form of EnteraGam®. In addition, she was

also prescribed a higher dose of steroids, (despite the fact they were previously ineffective). Perhaps not surprisingly, prior to the start of EnteraGam®, Brenda began to experience "10 to 15 watery stools per day, accompanied by frequent bleeding during the approximately 3-week period on the higher steroid dose." Her EnteraGam® dose was 5 grams 4 times a day for one week, then 5 grams daily. Good news was on the horizon.

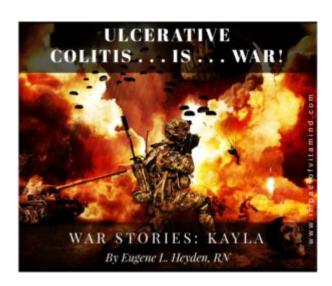
"At the follow-up, four-weeks after initiating SBI (EnteraGam®), the patient reported 1-2 formed bowel movements per day. She denied rectal bleeding and abdominal cramps." Impressive!

At two months (only two months, mind you) after initiating SBI therapy, a colonoscopy was performed. Brenda's colon looked completely normal, with no evidence of disease.

One year later, and maintained only on SBI, 5 grams per day (no medication), Brenda remains symptom free.

Note: This case report is taken from Beauerle et al., 2015.

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