



Case Report

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# Intracolonic Bifidobacterium can Reduce Colonic Inflammation and Symptoms



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## Background

Chronic diarrhea is a common illness in Western countries, such as Australia, Canada, Ireland, and the United States [1]. It was reported that chronic diarrhea or loose or watery stools affected up to 26.9% of adults in the United States [2]. The presence of chronic diarrhea may affect patients' quality of life, cause them to experience reduced productivity and increase the economic burden. Available evidence indicated that chronic diarrhea represents a significant health care burden in Western countries [3].

## Methods



Figure 1: Diverticulum in descending colon.

We reported a 73 year old man with a history of chronic kidney failure 10 years had watery and non bloody, non steatorrhea 7-8 time/day diarrhea for 3 months with unresponding antimicrobial and antidiarrheal (ornidazol, metronidazol, rifaximin, lopermid)

treatment. The stool clostridium difficile cytotoxin assay was negative. Fecal lactoferrin was normal. The patient had no antibiotic exposure in the six weeks prior to diarrhea. Stool cultures and analysis for rotavirus, staphylococcus, shigella, salmonella and candida were negative. Flexible sigmoidoscopy revealed normal colonic mucosa and diverticulum in descending, sigmoid colon (Figure 1 & 2). Pathologic examination of multiple colonoscopic samples were revealed non specific colitis.



Figure 2: Appearance of colonic mucosa.

## Results

Intraluminal Bifidobacterium animalis subsp. lactis [9,2mg (2x10<sup>9</sup> kob) in 250ml serum physiologic] was performed during flexible sigmoidoscopy. Oral Bifidobacterium animalis subsp. lactis [9,2mg (2x10<sup>9</sup> kob)] was started for one month. The patient's condition improved after intraluminal and oral

*Bifidobacterium animalis subsp. lactis* treatment. Diarrhea and symptoms were improved and did not repeat in 2 two months.

### Conclusion

Pathogenesis of chronic diarrhea is thought to be through different factors and there is a relationship between the gut flora and the risk of its development. Probiotics can manipulate the microflora in chronic inflammation and may be effective in treating inflammation. *Bifidobacterium strains* are saccharolytic and their growth in the gut can be promoted by non-absorbable carbohydrates and its increase in the colon appears to be of benefit [4,5]. To our knowledge, this is the first documented case to report successful intracolonic and oral *Bifidobacterium animalis subsp. Lactis* treatment used in a unresponsive chronic diarrhea.

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