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File: ■ Boswellia (*Boswellia serrata*, Burseraceae)
■ Irritable Bowel Syndrome

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RE: Casperome, a Boswellia Extract, Provides Relief of Irritable Bowel Syndrome

Riva A, Giacomelli L, Togni S, Franceschi F, Egenhoffner R, Zuccarini MC, Belcaro G. Oral administration of a lecithin-based delivery form of boswellic acids (Casperone®) for the prevention of symptoms of irritable bowel syndrome: a randomized clinical study. *Minerva Gastroenterol Dietol*. March 2019;65(1):30-35. doi: 10.23736/S1121-421X.18.02530-8.

Symptoms of irritable bowel syndrome (IBS), particularly abdominal pain or discomfort and disturbed defecation, are bothersome for many patients. Although the pathophysiology of IBS is uncertain, the contributing factors appear to be dysregulation of the brain-gut axis, visceral hypersensitivity, gut dysmotility, low-grade mucosal inflammation, increased intestinal permeability, and altered microbiota. IBS management primarily aims to lessen the severity of the symptoms. Medical treatments include 5-HT3 antagonists, 5-HT4 agonists, and antidepressants, as well as alternative and complementary medicines. Casperome (Indena S.p.A; Milan, Italy), a lecithin-based delivery form of a standardized extract of boswellia (*Boswellia serrata*, Burseraceae) formulated with Phytosome technology, has been shown to be effective in managing IBS symptoms. These authors conducted a prospective, controlled, randomized study to evaluate long-term efficacy and safety of Casperome in preventing symptoms in patients with mild IBS.

Eligible patients were those who had experienced sporadic abdominal pain for eight to 14 months and minor alterations in bowel activity (diarrhea and/or constipation) for as many as 10 days in one month. They had a negative fecal occult blood (FOB) test and fecal calprotectin (CPN, a measure of inflammation in the intestines) test.

The study was conducted in Italy. Thirty-four patients were randomly assigned to receive standard management of IBS, including diet and, if needed, hyoscine butylbromide or papaverine hydrochloride plus 10 mg of belladonna (*Atropa belladonna*, Solanaceae) extract. Thirty-five patients were randomly assigned to receive diet management and to take one 250 g Casperome tablet daily.

Patients were allowed to use the rescue medication Buscopan Compositum (Boehringer Ingelheim; Ingelheim am Rhein, Germany) if their symptoms did not improve significantly.

Common IBS symptoms (including recurrent abdominal pain, abdominal pain at pressure, altered bowel movements, bloating, and spontaneous abdominal cramps) were evaluated at baseline and after three and six months. Also assessed were the need for rescue medications, use of a second occasional dose of Casperome, medical consultations, hospital evaluations or admissions, ultrasound evidence of air plus peristalsis and dilated bowel loops, FOB and CPN tests, oxidative stress, and adverse effects.

All 69 patients completed the study. At baseline, the two groups were similar in terms of IBS symptoms. After three and six months, mean scores for all symptoms except "altered bowel movements" were significantly lower in the Casperome group compared with the control group ($P<0.05$ for all values). The presence of bloating plus irregular peristalsis and distended bowel was significantly lower in the Casperome group compared with the control group at both time points ($P<0.05$). Patients in the Casperome group had a significantly lower need for rescue medications, and fewer consultations or hospital evaluations/admissions compared with the control group ($P<0.05$). Nine patients in the Casperome group requested a second dose of the extract.

After six months, ultrasound evidence of air plus peristalsis and dilated bowel loops was observed in 58.82% of the control group and in 17.14% of the Casperome group ($P<0.05$). The FOB and CPN tests at baseline and after three and six months in both groups were negative. Oxidative stress after six months was significantly decreased in the Casperome group ($P<0.05$).

No serious adverse effects were reported. In the control group, constipation was reported by 12 patients after three months and by 13 patients after six months. In the Casperome group, constipation was reported by two patients after three months and by three patients after six months. The lower occurrence of adverse effects in the Casperome group was significant compared with the control group ($P<0.05$). Transient hypotensive episodes in two patients in the control group were considered to be potentially related to the study product.

The authors attribute effectiveness of Casperome to "its anti-inflammatory and intestinal motility normalization properties" and suggest it is a safe and effective alternative approach for managing IBS symptoms in individuals who are otherwise healthy.

Three of the authors are employees of Indena, the makers of Casperome. One author consults for the company.

—Shari Henson

Referenced article can be accessed at https://www.minervamedica.it/en/journals/gastroenterologica-dietologica/article.php?cod=R08Y2019N01A0030.