

**Peppermint oil: A herbal solution for irritable bowel syndrome**

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Madam, Irritable bowel syndrome (IBS) is a common gastrointestinal (GI) disorder, with a prevalence of approximately 11% worldwide and 13.3% in Pakistan.<sup>1,2</sup> Symptoms of this disease are usually nonspecific, including bloating, abdominal discomfort with defecation and change in bowel habits, resulting in most patients going without seeking treatment.<sup>2</sup> Those who sought treatment did so due to a decreased quality of life (QoL) and higher anxiety, rather than increased severity of symptoms.<sup>2</sup>

Although the disease mortality is extremely low, studies have reported a strong association between depression (prevalence=38-100%) and decreased QoL in IBS patients.<sup>3</sup> Moreover, IBS predisposes patients to a host of psychological disorders in addition to depression, which significantly impede treatment and lower QoL. As the disease pathophysiology remains largely unclear, treatment is focused mainly towards symptomatic relief and management.<sup>3</sup> In addition to the available allopathic remedies, peppermint oil (PO) has emerged as a popular herbal alternative in recent years and its efficacy and safety have been investigated by multiple studies.

A meta-analysis by Hawrelak et al. showed that PO was a significant improvement over placebo in alleviating abdominal pain (RR= 2.154, CI=1.56-2.94) and global symptoms of IBS (RR = 1.95, CI=1.46-2.62).<sup>4</sup> PO is generally a safe treatment with few adverse effects; namely heartburn and perianal burning. Compared to other treatments such as tricyclic antidepressants and alosetron, it has a significantly higher benefit-to-harm ratio (25:1) second only to Rifaximin and a small therapeutic dose (0.2mlx3-6 times/day).<sup>5</sup>

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L-menthol, the primary active ingredient in PO, acts primarily as a calcium-channel antagonist in smooth muscles.<sup>5</sup> Additionally, other compounds in PO, including menthone, menthyl acetate, isomenthone, etc contributed independently to its therapeutic effect via numerous mechanisms of action (MoA). These MoAs included but were not limited to antinociception via transient-receptor potential channels, GI histaminergic and cholinergic receptor modulation, serotonergic antagonism and antiinflammatory effects.<sup>5</sup>

In countries like Pakistan where herbal medicines are often more popular than their allopathic counterparts, POs fit right in as an effective, alternative treatment that is scientifically proven. It can potentially serve as a valuable asset for IBS treatment in areas where access to medicine is limited, or where cost becomes an issue. These factors in association with its proven efficacy and lack of side effects merit its prescription by physicians as an alternative remedy for the treatment of IBS.

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