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Letter to the Editor

Potential Use of Icosapent Ethyl in the Management of Acute Pancreatitis

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LETTER TO THE EDITOR

Dear Editor,

We are writing to highlight the potential use of Icosapent Ethyl (Vascepa) as a management option for acute pancreatitis. To the best of my knowledge, a limited number of studies have investigated this use, but it is not yet Food and Drug Administration (FDA) approved for this indication.

Previous studies have suggested that omega-3 fatty acids, such as Eicosapentaenoic Acid (EPA) and Docosahexaenoic Acid (DHA), may have anti-inflammatory properties and could potentially be beneficial in reducing the inflammation and triglyceride levels associated with acute pancreatitis [1]. These mechanisms consist of systemic inflammation reduction by the inhibition of inflammatory mediators since omega-3 fatty acids inhibit the synthesis of pro-inflammatory cytokines such as IL-1β and IL-6 [2]. Moreover, they alter intracellular signaling pathways linked to transcription factors such as nuclear factor-κB, which impacts the expression of genes linked to inflammation [3]. Surprisingly, it helped with inflammation resolution by enhancing the removal of inflammatory cells and promoting the production of certain pro-resolving mediators in mice with pancreatitis [4].

EPA may serve as a valuable dietary supplement for individuals with risk factors for heart disease. It has potential benefits for conditions such as cardiovascular disease, diabetes, obesity, cancer, and stroke. EPA has been shown to lower inflammation, cholesterol, blood pressure, and blood clotting, and improve coronary artery function. Additionally, it can reduce inflammation and enhance body composition, supporting weight loss efforts [5].

A case study reported the use of Icosapent Ethyl as a treatment for severe acute pancreatitis in a 31-year-old male patient with abrupt acute alcoholic pancreatitis, requiring ICU admission, intubation, and mechanical ventilation, renal replacement therapy, and pressors; the patient showed remarkable improvement after initiation of icosapent Ethyl treatment via gastrostomy tube (G-tube) and had a complete recovery [1].

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A randomized clinical trial (RCT) by Wang (2008) investigated the impact of omega-3 fatty acid supplementation on inflammation and systemic disease progression in severe acute pancreatitis. 40 patients with severe acute pancreatitis were randomly assigned to receive parenteral nutrition with either soybean oil or fish oil. Results revealed that patients who received fish oil had higher levels of EPA, reduced C-reactive protein (CRP) levels, and improved oxygenation index after five days of treatment. Additionally, the fish oil group had a shorter duration of continuous renal replacement therapy compared to the control group. The study concludes that supplementing parenteral nutrition with omega-3 fatty acids can effectively decrease inflammation, enhance respiratory function, and reduce the need for Continuous Renal Replacement Therapy (CRRT) in severe acute pancreatitis [6].

Currently, treatment options for acute pancreatitis caused by hypertriglyceridemia are limited as there are no FDA-approved options for intractable hyperchylomicronemia. Lifestyle modifications, such as weight loss and dietary intake limitations, are essential in treating patients with hypertriglyceridemia [7].

However, these findings suggest that Vascepa may be a breakthrough therapy for severe acute pancreatitis due to its anti-inflammatory activity and the absence of direct therapy for the disease. More research including RCTs is needed to confirm the safety and efficacy of Vascepa as a management option for acute pancreatitis.

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