

Borage, a Forgotten Iranian Heritage Now Used in ARDS Treatment

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Borage (Borago officinalis) is an herb originating in Iran and some Mediterranean countries of West Asia but found almost all over the world. It grows to a height of 60–100 cm. It has blue, star-shaped flowers. The anti-inflammatory properties of borage are attributed to gamma linolenic acid (GLA) which is found in its seeds. GLA converts to a hormone-like substance called prostaglandin E1 which has anti-inflammatory and vasodilator properties. Borage is the highest known plant-based source for GLA (17-28%). Other substances found in borage seed are linoleic acid (35-38%), oleic acid (16-20%), palmitic acid (10-11%), stearic acid (3.5-4.5%), eicosenoic acid (3.5-5.5%), erucic acid (1.5-3.5%), and nervonic acid (1.5%).

Historical reports show that borage has been used in different populations and cultures due to its known properties. Avicenna provided many guidelines for the usages of borage in different medicinal preparations. Though he had described the conduct of a controlled research, it was not until very recently that borage was used in different trials. Some pharmaceutical companies have been using its extract as a base to provide enteral feeding formula for critically ill patients.

Borage is indicated in treatment of bronchitis and respiratory infections due to its anti-inflammatory effects. The flowers can be prepared in infusion to take advantage of their medicinal properties. In Iran, it is a common tradition to brew the flower and take it like tea in servings.

The guideline of Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition states that patients with severe Acute Lung Injury (ALI) and Acute Respiratory Distress Syndrome (ARDS) should be placed on enteral formulations to provide an anti-inflammatory lipid profile like borage oil (Grade A).

Recently, more and more studies on the clinical uses of borage are being published in prestigious journals. Borage is currently used for the treatment of patients with respiratory problems in NRITLD. It seems that this forgotten heritage in Iran merits much more attention considering the present competition in the conduction of research projects.



REFERENCE:

Guidelines for the provision and assessment of nutrition support therapy in the adult critically ill patient: Crit Care Med 2009; 37(5).