Balneotherapy and gastritis

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ABSTRACT

Gastritis is the anomaly of the stomach mucosa. Stress, infectious diseases, liver diseases, kidney diseases, intestinal problems and various endocrine system problems are caused by foreign substances, food toxins, food allergies, bacterial gastric diseases, parasites, certain viruses and fungi gastritis. The occurrence of gastritis in animals is a very common, especially in pet and small animals. H2 receptor blockers, mucosal preservatives and acid neutralizers are commonly used in the treatment of gastritis, but they experience a transient recovery as much as the duration of action. Hot spring water helps prevent gastritis caused by factors such as stress by providing relaxation due to thermal effects, as well as providing mucous membrane protective effect with minerals and compounds such as aluminum contained in them. Secreted excessive HCl may be neutralized by drinking hot spring water which contains high HCO3, thereby helping to heal the gastritis.

Key words: Gastritis, balneotherapy, human, animals.

INTRODUCTION

Gastric mucosal lesion is commonly understood as an acute stomach lesion, which is characterized by sudden gastrointestinal bleeding, ischemic injury, acute gastric ulcer, and abdominal pain. The pathogenesis of gastric mucosal lesion is multifactorial. Physical stress, psychological stress, tobacco (smoking and chewing), alcohol, drugs and Helicobacter pylori may increase the risk of inflammation and ulcers in the stomach (Etani et al., 2017).

Meanly, gastritis is a general term used to describe acute or chronic vomiting syndrome of the gastrointestinal mucosal inflammation. It stimulates the release of inflammatory and vasoactive mediators by irritation, infection, antigenic stimulation or injury (e.g. chemical, erosion, ulceration) of stomach mucosa, subsequent breakdown of gastric epithelial cells, increased gastric acid secretion and impaired gastric barrier function (Sensoy, 2013). Among the causes, there is a risk of malnutrition (e.g. ingestion of new, impaired or contaminated foods or foreign substances), drug or toxin ingestion (e.g. antibiotics, NSAIDs, corticosteroids, plants, chemicals), systemic diseases (e.g. pancreatitis, uremia (e.g., gastropathy, hypoadrenocorticism), endoparasitism (e.g., Physaloptera sp., Ollulanus sp. [cat]) or bacterial (e.g. Helicobacter related disease) or viral (e.g. parvovirus gastroenteritis, 2012).

Sudden onset vomiting is a characteristic. Continuous vomiting leads to functional impairment in vital organs, impaired blood buffer system and pH shift to alkalis and disruption of metabolic activities. Gastritis treatment is usually symptomatic and supportive. In small amounts, oral fluid can be given frequently, and the amount of acid decreases as volume increases (Mayer et al., 2001; Peloso et al., 2002; Painsipp et al., 2007; Mitchell, 2012).

In addition to being rich in many minerals and compounds, hot spring waters also contain radon gas (Elitok, 2011). Research has also shown that water containing radon gas is an effective antioxidant, which is very beneficial in eliminating gastric mucosal damage (Tanaka et al., 1988). However, the mechanisms underlying the health effects have not been investigated (Etani et al., 2017). Radon therapy using radon (222Rn) gas is classified into two types of treatment: inhalation of radon gas and drinking water containing radon. Although short- or long-term intake of spa water is effective in increasing gastric
mucosal blood flow, and spa water therapy is useful for treating chronic gastritis and gastric ulcer, but the underlying mechanisms for and precise effects of radon protection against mucosal injury are unclear (Etani et al., 2017).

Absolutely, important researches on the use long-term hot spring waters, reported that these waters improve gastritis cases by increasing the stomach blood flow (Tanaka et al., 1988; Osink et al., 1990; Etani et al., 2016).

There is a possibility that hot spring water drinking and radon inhalation suppress ethanol-induced gastric mucosal injury, via the activation of antioxidative enzymes, specifically CAT. Although the activation of antioxidative mechanisms after hot spring water intake and radon inhalation was less effective in the stomach than in other tissues (based on our previous study), oxidative stress induced by ethanol was clearly suppressed. In this study, the effects of radon inhalation and drinking on blood flow in the stomach were not examined. It is highly possible that activation of antioxidant function is one of the mechanisms of radon therapy; however, more detailed studies are necessary to further clarify the mechanism by which radon affects the stomach (Etani et al., 2017).

The aim of this compilation is to demonstrate the therapeutic effects of balneotherapy waters containing radon gasses in the European Union norms on the gastritis case in the light of existing literature.

REFERENCES


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