



## Case Reports

# Garlic-induced Esophagitis

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## INTRODUCTION

Garlic (*Allium sativum*), is used as a flavoring in cooking at all of the world, and it has also been used as a medicine throughout ancient and new life. It has been taken to prevent and treat a wide range of diseases at some countries, especially yeast countries (1). Garlic not only makes food delicious, it also has some health benefits. Some of those; lowering blood pressure, increasing immunity, lowering LDL cholesterol levels, preventing neurological-degenerative diseases, supporting eye health. Garlic contains some important nutrients including, manganese, vitamin B, vitamin C, selenium and fiber for health.

## CASE REPORT

A patient (46-year-old male) came to our hospital with 12 hours of odynophagia and retrosternal pain complaint. History revealed that the patient had swallowed garlic 3 days ago with little water. We did upper endoscopy immediately and revealed an edematous, fragile mucosal area with superficial ulcers in the lower esophagus with a big raw garlic (Picture 1, 2, 3). The patient was managed with a liquid diet and sucralfate therapy. Esophageal symptoms resolved in 2 days, and pathology report showed erosion and ulceration at lower esophagus.

Picture 1: Garlic in the esophagus



## DISCUSSION

Garlic is a bulbous plant of the genus *Allium* (*Allium sativum* L.), which belongs to the Alliaceae family. Garlic has played an important role in

nutrition and medicine throughout history (1, 2). Some of the earliest references to this medicinal plant were found in Avesta, a collection of Zoroastrian scriptures probably compiled in the 6th century BC. Garlic was also an important remedy for Sumerians and ancient Egyptians. Records show that garlic was used when the Pyramids of Giza were built about 5,000 years ago. It is also known that Hippocrates, a former Greek physician known as the father of Western medicine, used garlic for a wide variety of conditions and diseases. Also during the oldest Olympics in Greece, there was some evidence that athletes fed garlic to increase endurance.

It is currently widely used for several conditions related to the blood system and the heart, including garlic, atherosclerosis (hardening of the arteries), high cholesterol, heart attack, coronary heart disease and hypertension (1, 2). Garlic is currently used by some people to prevent lung cancer, prostate cancer, breast cancer, stomach cancer, rectal cancer and colon cancer. Garlic is a rich source of vitamins and minerals. Garlic contains 33 kinds of sulfur compounds, 17 kinds of amino acids, minerals such as manganese and zinc, vitamin A, vitamin B and plenty of vitamin C.

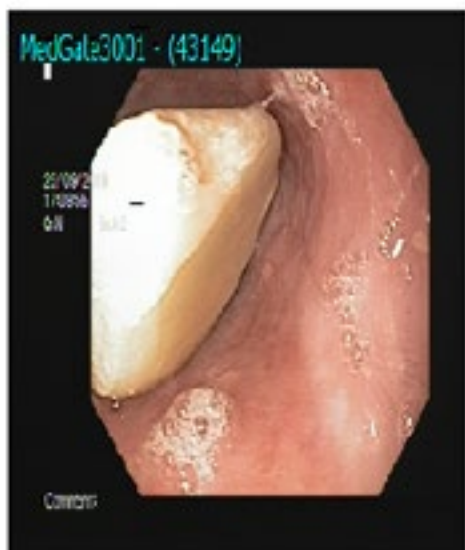
However, in the literature, a wound in the esophagus due to swallowing garlic has been found (3-10). In our patient, a large raw garlic was swallowed without chewing 3 days ago and remained in the esophagus, causing difficulty in swallowing and chest pain. Endoscopy was performed immediately. Endoscopy revealed a large, undigested garlic grain at the lower end of the esophagus. Ulceration, erosion and fragility were present in the lower region of the esophagus. Tripod, basket method was applied for removal of garlic, but could not be removed because the garlic grain was large. Due to ulceration in the lower region of the esophagus, garlic seed could not be thrown into the stomach. Sucralfate treatment was given to the patient. Endoscopy performed 1 day later showed that drug treatment was effective and that the garlic was not in the esophagus. Esophageal biopsy showed erosion, ulceration and inflammation. Management was consisted of a liquid diet, pantoprazole, and sucralfate. Symptoms resolved in few days at our patient.

In all cases in the literature, symptoms started within 24 hours of garlic ingestion, and presenting symptoms included retrosternal chest pain consistent with an esophageal source [5-7]. In our case, symptoms started within 24 hours of a raw garlic ingestion, and presenting symptoms included retrosternal chest pain, dysphagia and the food he ate was remaining in the esophagus. Endoscopy was a main diagnostic tool in our case. There are few publications on this subject in the literature. Garlic may have had a caustic effect in the

the cases due to its acidic pH. Direct esophageal injury from mechanical trauma and esophageal motility are another possible mechanism. Lifestyle measures, patient education level, including adequate water intake and avoidance of lying supine after meals, are likely to reduce the incidence of all types of “pill-induced esophagitis”, including those caused by food such as garlic (11,12). The patient had no history of NSAID, aspirin and corticosteroid use. This is a very interesting and first case in our hospital.

According to this case report and literature, garlic has a caustic effect on esophageal mucosa. Therefore, the patients should be aware of the direct caustic effect of garlic. Also, endoscopic examination is important in follow-up, particularly in cases involving direct injury, as it allows for reevaluation of healing and treatment efficacy in the swallowing of garlic and other causative foods and drugs.

Picture 2: Garlic in the esophagus



Picture 3: Garlic in the esophagus



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