

**Case Report**

# Allotriophagia of A Bundle of Dried Reeds, Sudden Death, and Colon Cancer: A Case Report

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**Abstract**

**Introduction:** Epilepsy patients sometimes exhibit abnormal behavior, such as allotriophagia. We experienced a case of allotriophagia of dried reeds, which resulted in massive vomitings and sudden death.

**Presentation of case:** A 69-year-old man died after vomitings of a large amount of bloody solution. Autopsy revealed that sharp edge of a piece of dried reeds penetrated the whole layer of the colon at the oral edge of the colon cancer.

**Conclusion:** A bundle of dried reeds stuck in the cancerous ulcer in the colon and induced massive bleeding.

**Keywords:** Epilepsy; Allotriophagia; Dried reeds; Hematemesis; Sudden death; Colon cancer; Smooth muscle action

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**Consent:** We confirm that the 1st daughter of the patient has given her informed consent for the case report to be published.

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## Introduction

Abnormal behaviors, such as allotriophagia, are known as pre- and post-consciousness disturbances in patients with epilepsy [1-3]. We encountered a patient who died of massive bloody vomitings from ulcer consisted of colon cancer, by the damage given by incarcerated dried reeds.

## Case Presentation

In February, 2009, a 69-year-old man, who has been suffering from epilepsy since his youth, was admitted to emergency unit of our hospital with vomitings of a large amount of brownish black materials. He has been in physical fatigue, loss of appetite and relapsing vomiting for the last 2 days, and fell into systolic state in his house, when an emergency ambulance reached. Blood test showed mild anemia ( $3.44 \times 10^6/L$ ), slight leukocytosis ( $10.6 \times 10^9/L$ ), high creatine kinase (CK, 2923 U/L), high asparatate transaminase (371 U/L), and high alanin transaminase (371 U/L). Blood glucose was 8 mg/dl. He was given an intravenous administration of adrenalin, but fell into cardio-respiratory arrest. His death was confirmed

soon after his arrival to the emergency unit.

He used to have epilepsy attacks 2-3 times monthly since his youth and occasional allotriophagia was noticed sometimes by his family members. He was seen by local hospital regularly and was given valproate. The attacks occurred even while walking in the fields and weeds were eaten. He attended a psychiatric hospital and had been examined by electron encephalography, revealing sharp waves in the left anterior and mid temporal areas.

At autopsy, a large bundle of dried reeds, measuring 5.5 cm in length and 1.5 cm in diameter, was incarcerated in the diverticulum-like ulcer covered by an inflammatory coat (Figure 1A) in the ascending colon. The base of the ulcer was occupied by cancerous mass measured about 3.5 cm in length (Figures 1A and 1B). A piece of the dried reeds was penetrated the whole layers of the colon at the proximal edge of the cancerous mass (Figure 1C). Mucosae of the esophagus, stomach, small intestine and ascending colon were severely hemorrhagic, but no fatal pathological findings were detected in these organs and other parts of the colon. The cancerous proliferation penetrated into the subserosal layer, and no muscle layers were left in the cancerous lesion.

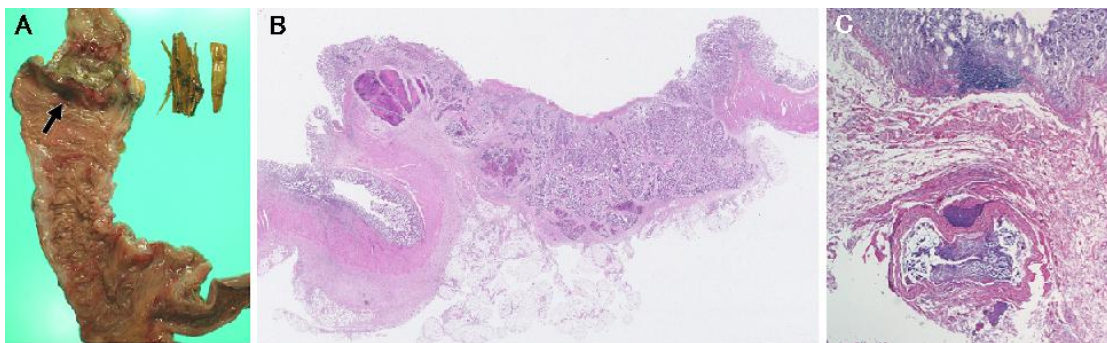


Figure (1A) A part of the colon, showing a deep ulcer and a bundle and piece of dried reeds removed from the inside of the ulcer. One pin hole (arrow) is seen in the oral-side edge of the ulcer base, which was perforated by a sharp edge of a bundle of reed ( $\times 0.2$ ). (1B) Histological section of the colon, showing moderately differentiated adenocarcinoma of the colon found beneath the bundle of reeds. Cancer cells infiltrated into the subserosal layer, destroying the muscle layers completely (H&E staining  $\times 1.8$ ). (1C) A slit hole in the colon where the reed was penetrated thoroughly the whole layer of the colon (after removal of the reed) (H&E staining  $\times 20$ ).

## Discussion

Sudden unexpected death is a common cause of death among patients with epilepsy [1-3], in which patients sometimes have abnormal behaviors, such as allotriophagia. Family members of the patient mentioned that he sometimes made allotriophagia before and after the epileptic seizures. It was reasonable to assume that the large bundle of dried reeds was swallowed unconsciously and moved from the mouth through the pharynx, esophagus, stomach, small intestine, and ascending colon. These organs send the bundle to the ascending colon by rhythmical contractions of the muscle layers. However, the cancerous lesion of colon lacked muscle layers, and the incarceration of the bundle occurred by the contraction of muscle layers of proximal and distal colons. There was heterotopic pin hole in the muscle layers covered by rather thick regenerating mucosa [4, 5]. It is assumed that the hole established more than 3 weeks before his death. The vomiting of the large amounts of bloody solutions is thought to have originated from the ulcer.

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