

Clinica-Medical Image

Bradycardia and Syncope Associated with Swallowing 'Yokan' Japanese Sticky Sweets

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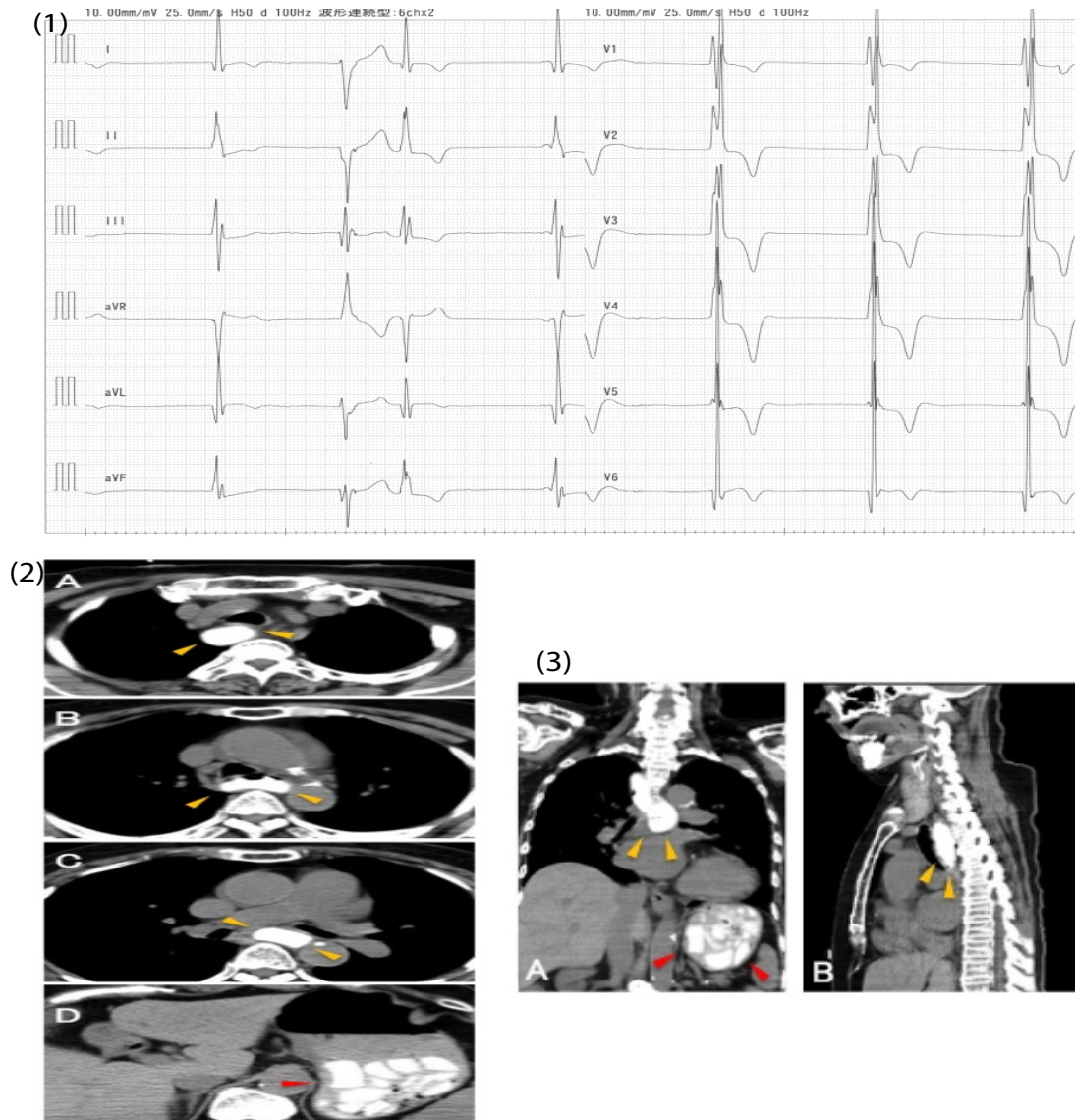


Figure 1: An electrocardiogram at the time of admission shows junctional rhythm of pulse 48/min.

Figure 2: An axial CT shows that 'Yokan' is filled and stagnant in the upper middle thoracic esophagus however it is absent in lower abdominal thoracic esophagus (yellow arrow head) (A, B, C). 'Yokan' in the stomach is not fully masticated form (red arrow head) (D).

Figure 3: The same lesion in coronal and sagittal reformatted CT. 'Yokan' is located in the middle thoracic esophagus at the level of the tracheal bifurcation (A, B).

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Citation: Shioya N, Tsukamoto Y, Inoue N, Kawashima N, Hazama K, et al. (2018) Bradycardia and Syncope Associated with Swallowing 'Yokan' Japanese Sticky Sweets. *Int J Clin Med Imaging* 5: 623. doi:10.4172/2376-0249.1000623

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Keywords: Swallowing syncope; Sticky foods

Clinical Image

An 89-year-old woman was transferred to the emergency department after a syncopal episode that occurred while she was eating the Japanese confectionery called ‘Yokan’. She was cyanotic and her breathing stopped. Upon arrival, she developed bradycardia of 48 beats/min (Figure 1). An initial CT scan showed that the second narrowed part of the esophagus contained ‘Yokan’ (Figures 2 and 3). Two days later, her bradycardia improved, and she no longer had impaired consciousness. In a follow-up CT scan, there was no ‘Yokan’ present in the esophagus.

‘Yokan’ is a sticky Japanese sweet made of red bean paste, agar, and sugar. The pathogenic mechanism is thought to occur via a vagal reflex resulting in inhibition of the normal cardiac conduction system. In this case, ‘Yokan’ filling the esophagus results in stretching of the mechanical receptors of the esophagus. This signal is transmitted from the afferent fibers of the vagal plexus of the esophagus to the brainstem, which then stimulates efferent fibers and cardiovascular depression. The consistency and temperature of food products are thought to play vital roles in the pathogenic mechanism of swallowing syncope. It is important to be aware that ‘Yokan’, when not masticated, may cause swallowing syncope.