An unusual cause of syncope

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An 86-year-old lady with a past medical history of hypertension, chronic kidney disease stage 3 and osteoarthritis presented to our institution with a 6-year history of syncopal episodes. These episodes of transient loss of consciousness occurred most frequently while sitting for a meal and were occasionally related to choking. On one occasion she had a secondary partial seizure related to one of these collapse episodes with no residual neurological deficit. Her physical examination was unremarkable. Previous investigation with an electrocardiogram (ECG), a carotid sinus massage, magnetic resonance imaging (MRI) brain, electroencephalograph and 24-h blood pressure monitoring were normal.

She was referred to the gastroenterologists with a history of choking and dysphagia. Careful history taken with her daughters present revealed that these episodes of dysphagia were occasionally related to dizzy episodes and rarely would lead to a collapse. A barium swallow (Figure 1) showed a small hiatus hernia and tertiary contractions in the lower oesophagus with mild gastro-oesophageal reflux. An oesophagogastroduodenoscopy with biopsies confirmed the hiatus hernia and mild chronic reflux oesophagitis. Her ECG showed normal sinus rhythm with a rate of 72 beats/min. A 24-h ECG monitor revealed sinus rhythm with first degree and an episode of second-degree atrioventricular (AV) block. The longest r-r interval was 3.75 s (Figure 2). This pause was related to eating a meal. The patient was given the diagnosis of swallow syncope and she subsequently had a permanent pacemaker inserted.

Swallow or deglutination syncope is a rare neurally mediated syncope. It is more common in men and the majority of cases exhibit oesophageal abnormalities.1 The syncope is due to a vasovagal reflex triggered by stimulation of the oesophagus causing bradycardia.2 The proposed mechanism of...
this syndrome has been attributed to an abnormal reflex via the afferent sensory fibres from the oesophageal surface and the efferent fibres to the heart via the vagus nerve.\cite{3,4} Swallowing can provoke a range of arrhythmias; it can lead to various degrees of AV block, nodal or sinus bradycardia, ventricular asystole and atrial fibrillation.\cite{5} The reflex can be provoked by the ingestion of solid food, hot or cold liquids and carbonated beverages.\cite{6} Symptoms range from light-headedness to transient loss of consciousness and in our case a subsequent hypoxic seizure during swallowing. Cardiac pacemakers have been shown to be the best method of prevention for the recurrent syncopal episodes.\cite{6}

Conflict of interest: None declared.

References


Figure 2. ECG rhythm strip illustrating second-degree AV block with a pause of 3.75 s.