

Swallow Syncope in a Patient with Oesophageal Stenosis Caused by an Ascending Aorta Aneurysm

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Swallow syncope is usually caused by organic or functional disorders of the oesophagus due to abnormal vasovagal reflex. In elderly patients this situation could be confused with postprandial hypotension. We present a case of an elderly patient with swallow syncope that was induced by an ascending aorta aneurysm.

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Swallow syncope is usually presented in patients with organic or functional disorders of the oesophagus¹. In elderly patients this situation could be confused with postprandial hypotension².

We present a case of an elderly patient with swallow syncope.

Case description

An 86-year-old female presented complaining of a syncopal episode while eating. The episode lasted 2-3 min and neither seizure, nausea nor emesis were reported. There was no history of previous syncopal episodes. Nevertheless during hospitalization the patient experienced one more syncopal episode, which also occurred during a meal. The doctor, who was called to examine the patient, arrived during recovery and found paleness, bradycardia (45 bpm) and low blood pressure (80/60 mmHg). There were no signs of urine or faeces loss. After this episode, the patient recovered completely. The patient had a medical history of hypothyroidism (1990) and gastrorrhagia (25 years ago).

Upon clinical examination the patient was found to be in a good condition,

totally oriented in time and place, with normal heart rate (60 beats /min) and normal blood pressure (120/75 mmHg). On heart auscultation, a mild aortic diastolic murmur was heard. During her hospitalization, arterial blood pressure was measured during meals and for the following 90 min (every 5 min) and no hypotension was recorded. All the other examinations showed no pathological findings.

The X-ray presented slightly increased cardiothoracic ratio and calcinosis of the aortic arch. The blood tests, computed tomography of the brain and the remaining laboratory tests were without pathological findings.

The 24hour Holter recording was normal as the ECG. The transthoracic echocardiogram showed diastolic dysfunction, mild aortic valve regurgitation (1-2+/4+), mild tricuspid regurgitation and significant dilatation of the ascending aorta.

The findings of the barium meal were: "Oesophagus: with signs of tertiary movements and multiple compulsive impressions due to vessels. An area with difficult passage due to outer pressure possibly caused by an ascending aorta aneurysm is checked in the middle portion.

Stomach: hypotonic with muciferous atrophy. Duodenum: a sizeable diverticulum is checked in the second portion. Remaining portions: normal". The computed tomography that followed showed an aneurysmatic dilatation of the ascending aorta (5,31×4,94 cm). Surgical repair of the aneurysm was proposed to the patient, but she, and her relatives, refused this treatment. The implantation of a permanent pacemaker³ as an alternative solution was also rejected by the patient. The patient left the hospital with instructions for aqueous meals and avoidance of swallowing cold drinks and big morsels⁴. She experienced no further syncopal episodes during the following ten months.

Discussion

Swallow syncope in elderly patients must be differentiated from the postprandial syncope, which is usually presented in elderly people, due to postprandial hypotension and appears 45-60 min after meal^{5,6}.

In the presented case the medical history (patient without previous symptoms, syncope during and not after the meal), the clinical examination (no hypotension after meals), but also the clinical findings from the episode that occurred during her hospitalization, led us to the conclusion that it wasn't a case of postprandial syncope but rather of a swallow syncope. So, the diagnostic approach was based on the oesophagus investigation. The barium meal showed significant stenosis in the middle portion of oesophagus that was probably caused by an external pressure. The chest computed tomography that followed confirmed this finding and proved that the external pressure was due to an ascending aorta aneurysm. The ascending aorta aneurysm caused a dislodgment in the oesophagus that was represented in the barium meal (Figure 1).

Swallow syncope is usually presented in patients with organic or functional disorders of the oesophagus. These are: diverticulum, achalasia, diffused convulsion and oesophagus stenoses. It is rarely caused by cardiac diseases such as acute rheumatic carditis under therapy with digitalis, big calcified masses in the aortic valve and acute myocardial infarction. This disease is usually combined with bradyarrhythmias, sinus bradycardia or pauses, sinoatrial and atrioventricular blocks.

Swallow syncope is a "reflex syncope". Other causes of this kind of syncope are: vasovagal, syncope due to micturition, defecation, coughing, sneeze, psychiatric illnesses, neuralgias (e.g. glossopharyngeal) and

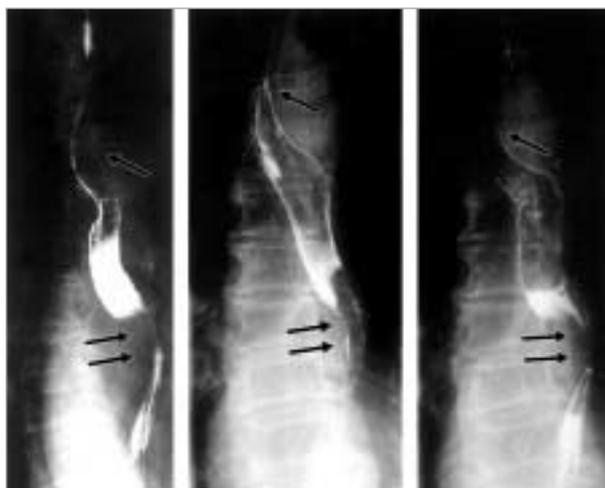


Figure 1. Barium swallow figure, showing a dislodgment caused by the aortic arch (*one arrow*) and a significant stenosis caused by the ascending aorta aneurysm (*two arrows*).

postprandial syncope, as well as syncope caused by airway stimulation (e.g. during endotracheal intubation or bronchoscopy) or by the Valsalva maneuver^{3,7-9}. These syndromes are also called "reflex-mediated vasomotor instability syndromes" and they cause syncope in the following manner: various stimuli trigger the afferent pathway via baroreceptors (mainly C fibers) which through the pneumogastric and glossopharyngeal nerve transmits signals to central nervous system sites (in the medulla, particularly the nucleus tractus solitarius), starting an efferent reflex answer, which via over-stimulation of the parasympathetic and inhibition of the sympathetic system causes vasodilatation (hypotension), bradycardia and thus syncope as a final result¹¹.

The management of such syndromes' includes, withdrawal of the causing factor (if possible), patient education (mainly to avoid the responsible cause), medical therapy (with b-blockers, anticholinergic drugs, theophylline, disopyramide, serotonin reuptake inhibitors, fludocortizone, etc) and finally implantation of a permanent pacemaker where necessary^{4,12,13}. Especially in cases where the swallow syncope is caused by an obstruction, this should be repaired - as recommended and in the above described case- and if this is not possible, nutrition habits should be changed (food in liquid form and small morsels are preferred, whereas very hot or cold drinks and solid foods should be avoided). Additional therapy with anticholinergics, disopyramide or other drugs may be needed. This illness rarely requires implantation of a permanent pacemaker^{14,15}.

In conclusion, the diagnostic investigation of the swallow syncope must include a thorough check of the oesophagus and the contiguous organs, if indications of external pressure exist. This disease must be always differentiated from the postprandial syncope, especially in elderly patients.

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