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# A Transesophageal Echocardiography Complication: Esophageal Diverticle Case Report

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## INTRODUTION

Transesophageal Echocardiography (TEE) is a valuable diagnostic tool that is considered to be relatively safe and semi-invasive method. However, manipulation and insertion of the probe is associated with rare complications like oropharyngeal, esophageal, or gastric trauma.

The overall incidences of TEE associated morbidity and mortality were reported in a study population were 0.2% and 0%, respectively[1]. They founded that the most common TEE associated complication was severe odynophagia, which occurred in 0.1% of the study population. Other complications included dental injury (0.03%), endotracheal tube malpositioning (0.03%), upper gastrointestinal hemorrhage (0.03%) esophageal perforation (0.01%). University of Ottawa Heart Institute authors stated 1.8% complication rate in 2947 procedures with single mortality while comparing the various sizes of probes[2].

They faced tracheal intubation or bronchospasm, upper gastrointestinal bleeding, angina, pulmonary edema, superficial thrombophlebitis and supraventricular tachycardia besides minor adverse events. The failure of probe insertion due to hypersensitive pharynx is a leading cause of complications. Even an interesting case of aerodigestive tract chemical injury resulting from a probable post-processing residual of the high level disinfectant solution (ortho-phthalaldehyde) used to disinfect the transesophageal echocardiogram probe performed during general anesthesia was also reported[3].

**Case report :** A 67 yrs old lady was admitted to 29 Mayis Hospital Cardiology Department for transesophageal echocardiography evaluation to determine the cause of cerebrovascular iscemic event which was associated with non-valvular atrial fibrillation. Three months before she had been evaluated by a thoracic Computerized Tomography ( CT ) in order to explain a left sided lung mass which revealed a sequel of tuberculosis. All other organs had been found to be normal including esophagus.

She was complaining of hemiplegia on the left side. Her physical exam and lab findings including transthoracic echocardiography showed no pathologic findings except atrial fibrillation. TEE was the choice of the diagnostic tool in order to find the presence of a left sided heart thrombi.

She was sedatized with 3 mg of midazolam besides topical anesthesia following careful questioning of TEE contraindications. The TEE run was employed with success and a mild spontaneous echo-contrast of the left atrium was detected. She had no complaint and sent to neurology Department for further treatment.

Five days later she developed dysphagia even with liquid substances and back pain. Her routine tests including abdominal ultrasonography revealed normal findings. Since the TEE probe insertion was uneventful, a presence of an esophageal trauma was not considered for the initial diagnosis. A barium study of the upper gastrointestinal system was advised by a surgeon and surprisingly a 2x3 cm diverticle of the mid-esophagus was detected (Fig. 1). Computed tomography of the upper gastrointestinal system was confirmed for the diagnosis and she was scheduled for the operation. The operation was held and the surgical diagnosis was confirmed as an acute and destructive (including hemorrhagic mucosal tears) diverticle.

**Implications:** The usefulness and safety of transesophageal echocardiography have been well described in the literature. However, rare complications of this procedure can occur and should be familiar to operators although the whole operation may be uneventful. It describe a case of esophageal diverticle due to TEE procedure since we did not meet any case of such complication in the literature.

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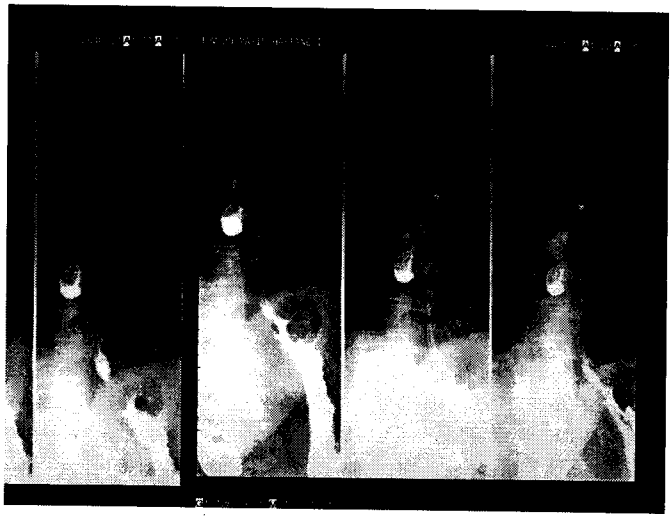

Fig. 1: The upper gastrointestinal system 2x3 cm diverticle of the mid-esophagus

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