Computed Tomography findings in a rare case of Esophageal Mucocele Involving entire Native Esophagus

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ABSTRACT
Isolation of a diseased esophagus with surgical bypass is an acceptable treatment option[1-5] performed for various benign and malignant conditions affecting the esophagus with excellent outcome observed in patients following corrosive injury. There may be continued production of mucosal secretions within the native esophagus which gets retained and forms a mucocele. It is uncommon for a mucocele to develop in an esophagus sustaining caustic injury as the epithelium responsible for mucous production is also destroyed. These mucoceles are usually small and localized to a segment and remain asymptomatic without need of any surgical intervention. We herein present a case of middle aged female who underwent esophageal replacement for corrosive ingestion and now presented with chest pain two years after the surgery secondary to a huge mucocele involving the entire native esophagus.

Key words: Esophageal Mucocele, Computed Tomography (CT), Corrosive injury, Native esophagus.

INTRODUCTION
The esophagus acts as a conduit for passage of food to the stomach and may get affected by various disease processes both benign and malignant with the involvement of a short segment or the entire length. Surgical bypass of the native diseased esophagus, most preferably performed by gastric pull up in substernal location is an accepted treatment modality for benign non dilatable strictures, esophageal trauma or perforation and for palliation of esophageal cancers. The continuation of mucosal secretions any accumulate overtime and lead to formation of an esophageal mucocele. Usually small and asymptomatic, an esophageal mucocele may reach massive dimensions and present with myriad features ranging from compression effect and respiratory distress to fever due to superimposed infection. However a mucocele formation is extremely uncommon in patients with caustic ingestion as the sclerosing property of the caustic agent also destroys the mucous secreting epithelium.

CASE HISTORY
A 25 year old female developed stricture of the upper thoracic oesophagus following accidental corrosive ingestion. After repeated failed attempts at bougie dilatation, sub-sternal gastric bypass was performed. Two years after the procedure, the patient presented with symptoms of vague pain and heaviness in the chest. The plain radiograph obtained during routine work up revealed mediastinal widening. The pos

DISCUSSION
Esophageal replacement provides excellent long term results in patients with advanced benign esophageal disease, wherein other methods of treatment

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such as dilatation and primary repair have failed.\textsuperscript{[1,2]} This procedure is done in two steps, first being exclusion of diseased esophagus from the gastrointestinal tract by stapling its lumen in the neck and at the gastro-esophageal junction and second step being re-establishing continuity by colonic or gastric interposition. The native esophagus is not removed in most benign diseases. At times only the lower end is tied and an end to side anastomosis is performed, leaving the native esophagus in continuity with neo esophagus.\textsuperscript{[3]} Esophageal mucocele of the native esophagus is a rare complication following esophageal replacement surgeries and occurs due to accumulation of secretions in the native isolated segment. It is uncommon in cases wherein replacement is done for caustic injuries as the glands responsible for accumulation of secretions are permanently damaged due to sclerosing action of the caustic agent.\textsuperscript{[2,6,7]} The mucocele usually develops within 2 months of surgery and may involve the upper, mid, lower or entire oesophagus.\textsuperscript{[6]} In our case, the patient presented 2 years after surgery with chest pain secondary to mucocele of the entire native esophagus.

The occurrence of esophageal mucoceles is variable with an incidence of 20 out of 51 patients in one study\textsuperscript{[6]} and 6 out of 37 patients in another.\textsuperscript{[2]} Esophageal mucocele occurring following surgery for caustic injury is extremely rare owing to reasons mentioned earlier. Also these lesions usually do not grow to large sizes due to pressure atrophy of glands. They usually have a diameter of 1 to 6 cm (mean, 4 cm) and a length of 1.5 to 14.0 cm (mean 6.5 cm).\textsuperscript{[2,6,7]} When small, these lesions seldom cause any symptom unless infected. Other unusual complications include tracheal compression, laryngeal nerve compression and tracheo esophageal fistula, all being rarely described in literature.\textsuperscript{[3-5]} CT scan is useful in verifying the presence of mucocele and also defines the extent and depicts any related complication like rupture or development of tracheo esophageal fistula.

Resection is recommended for larger (>5 cm) and symptomatic lesions.\textsuperscript{[2,6]} Computed tomography guided needle aspiration and drain placements have also been described in literature as an alternative to surgery. In patients with infected mucocele in whom native esophagus could not be excised because of extensive scarring, Olsen \textit{et al}\textsuperscript{[9]} and Mannell\textsuperscript{[6]} found the internal drainage procedure to be useful.

In conclusion, it is uncommon for an esophageal mucocele to develop in a native esophagus post caustic ingestion and extremely uncommon to attain a large dimension as highlighted in our case. Also it is important for both the radiologist and the physician to be aware of this rare complication of esophageal replacement surgery for early diagnosis and management, and reduce morbidity.

REFERENCES


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