# ESOPHAGEAL DYSMOTILITY IN LARYNGECTOMY PATIENTS: AN UNRECOGNIZED ASSOCIATION?

Maclean J[1], Szczesniak M[2], Paramsothy S[2], Zhang T[2], Graham, P[3], Cook IJ[2].
Dept. Speech Pathology[1], Dept. Gastroenterology & Hepatology[2] & Dept. Radiation Oncology[3], St George Hospital, Sydney

## Background

- Post laryngectomy dysphagia is an under recognised problem with significant morbidity.
- Dysphagia in this population is generally related to pharyngeal neuromyopathic dysfunction with or without pharyngo-esophageal junction fibrotic stenosis.
- We have observed esophageal dysmotility in a number of laryngectomees presenting with dysphagia; but the magnitude and significance of this problem is unclear.
- Achalasia is rare, with an incidence of 1:125,000, so would not be expected to be common in the laryngectomy population.

## Purpose

- To determine the incidence of esophageal dysmotility including achalasia in a cohort of laryngectomees reporting dysphagia.

## Methods

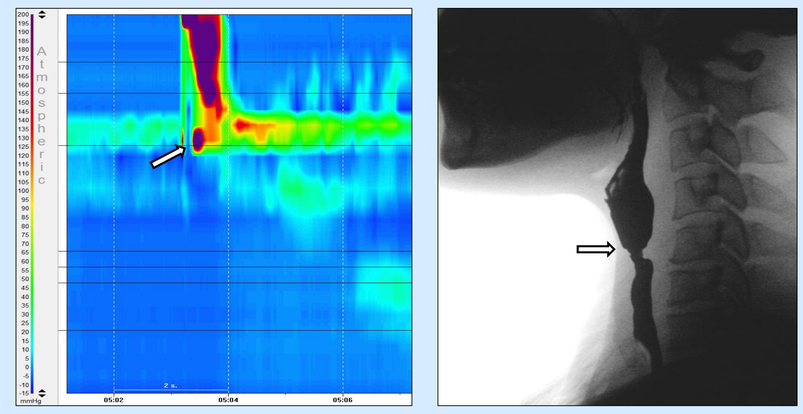
- Sixteen laryngectomees who presented to our multidisciplinary Swallow Clinic with dysphagia between Jan 2008-May 2011 all underwent clinical and radiographic assessment of swallowing.
- Esophageal manometry was performed in nine consecutive cases.

## Results

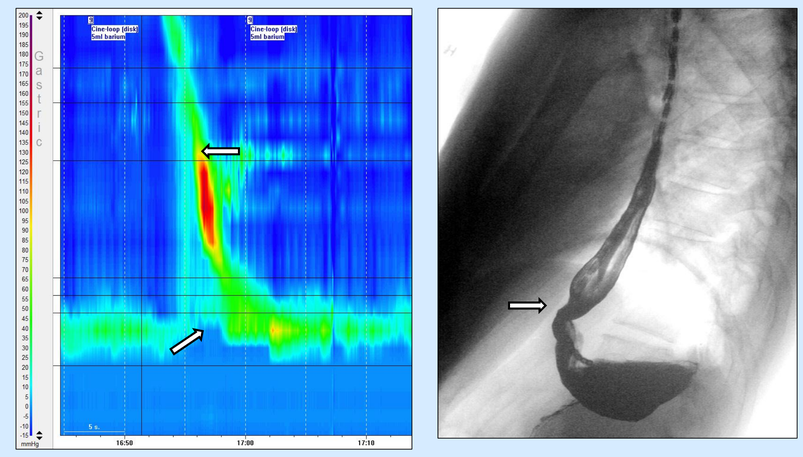
- A radiographically demonstrated dilated oesophagus indicating oesophageal dysmotility was present in 56 % (*n*=9) of the cohort, five of whom (55%) had an concurrent pharyngo-esophageal stenosis that required dilatation. All nine patients who underwent esophageal manometry had aperistalsis. Two of the nine (22%) had esophageal achalasia (i.e. concurrent failed lower esophageal sphincter relaxation).

| Patient sex/age | Years post laryngectomy | Adjuvant treatment | PE Stenosis present/absent on Videomanometry | Features of esophageal dysmotility identified on Videomanometry |
|---|---|---|---|---|
| M – 48 | 3 | Radiotherapy | Present | Aperistalsis |
| M – 65 | 6 (salvage surgery) | Radiotherapy | Present | Aperistalsis |
| M – 63 | 6 (salvage surgery) | Radiotherapy | Present | Nil |
| M – 73 | 18 | Chemoradiation | Present | Nil |
| F – 80 | 16 | Radiotherapy | Present | Aperistalsis |
| M – 62 | 18 | Radiotherapy | Present | Nil |
| M - 74 | 1 | Radiotherapy | Present | Nil |
| M - 80 | 16 | Radiotherapy | Present | Achalasia |
| F - 68 | 4 | Radiotherapy | Present | Nil |
| M - 62 | 5 (salvage surgery) | Chemoradiation | Present | Aperistalsis |
| M – 55 | 1 | Chemoradiation | Absent | Aperistalsis |
| M – 49 | 4 | Radiotherapy | Present | Nil |
| M – 73 | 7 | Radiotherapy | Absent | Aperistalsis |
| M – 81 | 12 | Radiotherapy | Absent | Aperistalsis |
| M – 71 | 1 | Radiotherapy | Present | Nil |
| M - 72 | 13 (salvage surgery) | Radiotherapy | Absent | Achalasia |

## CRICOPHARYNGEAL STRICTURE

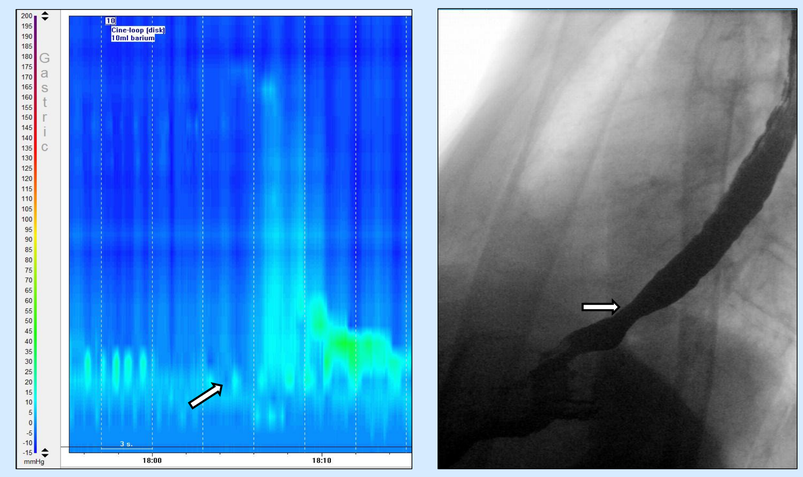


Pharyngeal manometry and corresponding radiograph showing pharyngeal stricture .



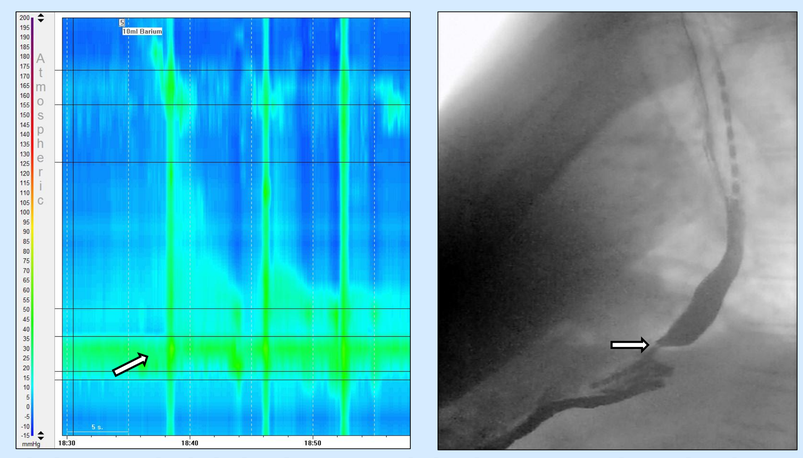
Oesophageal manometry and radiograph in same patient shows normal oesophageal peristalsis and complete lower oesophageal relaxation

## APERISTALSIS



Manometric and fluoroscopic evidence of aperistalsis. Complete relaxation of the lower oesophageal sphincter with passive flow of barium through the gastro-oesophageal junction and absence of oesophageal peristalsis.

## ACHALASIA



Example of achalasia with failed relaxation of the lower oesophageal sphincter, absence of persitalsis and dilated oesophageal body

## Conclusion

**In this small consecutive case series, we report a hitherto unrecognized association between laryngectomy +/- radiotherapy and aperistalsis and achalasia. Co-existent esophageal dysmotility needs to be considered in the dysphagic laryngectomee, particularly if they fail to respond to dilatation of the frequently identified concurrent cricopharyngeal stricture.**

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