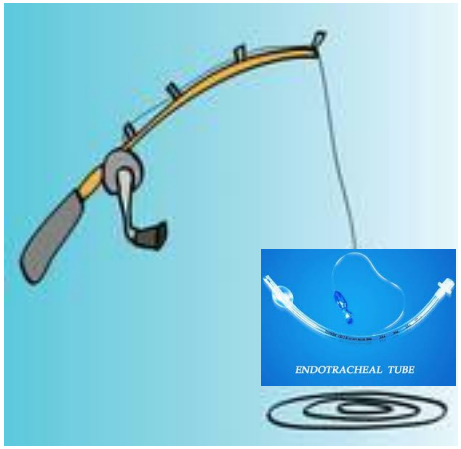
Hmm, a catchy title.....
"Catching" dysphagia post extubation? What's the incidence and what factors make someone more likely to get it?



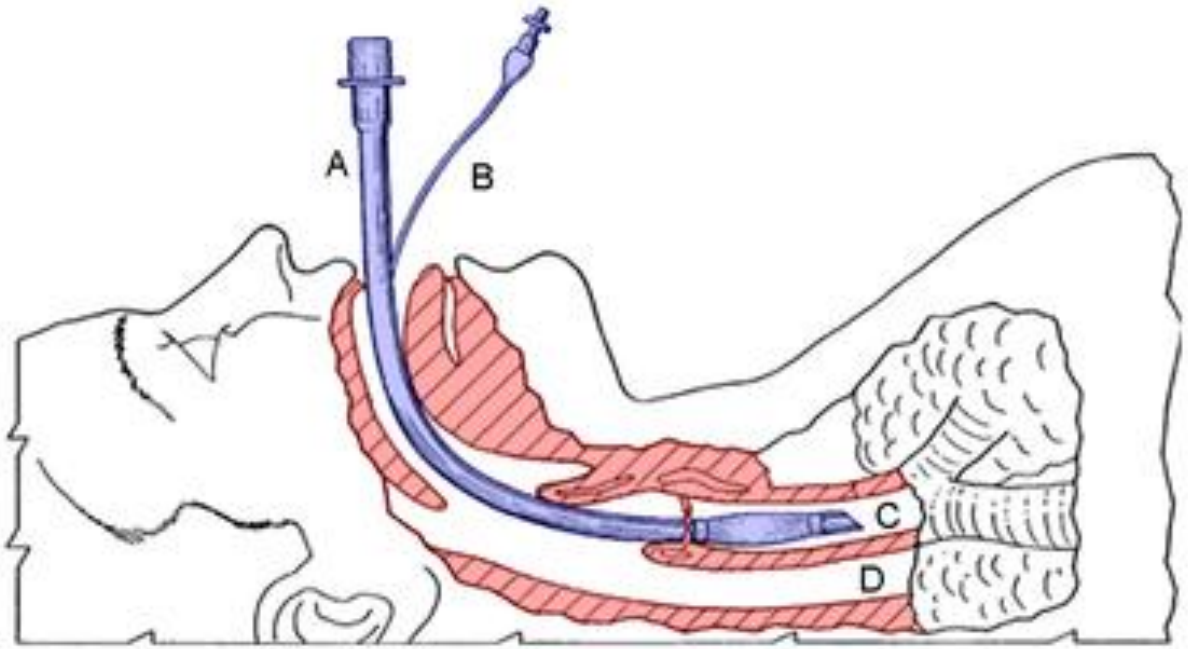
Kelly Richardson and Kate Watson (Co-Leaders)
Critical Care and Tracheostomy EBP group
10th December 2015

Overview

- Endotracheal intubation
- What are the effects of endotracheal intubation?
- 2015 clinical question
- 2015 clinical bottom line
- Results
- Overall findings
- Application to practice

- *PICI*
- *Tracheostomy Education Day*

What is endotracheal intubation?



What are the effects of endotracheal intubation?

- Dysphagia and dysphonia

- Vocal fold ulceration or laceration; laryngeal oedema, prolonged oropharyngeal muscle inactivity, arytenoid dislocation, contact ulcers, granulomas or haematomas

- Vocal tract pain and perceptual changes in voice are reported when intubated for less than 24 hours but damage is not always apparent with direct laryngoscopy

2015 clinical question

What is the incidence and what are the predictors of oropharyngeal dysphagia in extubated patients?

- Systematic Review 1945 – May 2009 (Skoretz, 2010)
- Medline and CINAHL : June 2009 – May 2015
- Inclusion criteria: patients intubated within an acute care hospital, adult population, all clinical specialties, discusses the clinical question – incidence and/or predictive factors
- 7 papers, including a systematic review were capped. 2 were excluded due to methodological flaws
- 4 articles were rated as level III-3 (NHMRC level)
- Systematic review is rated as level 1 but was descriptive rather than meta-analysis

CAT 2015: clinical bottom line

The incidences and predictors of post extubation dysphagia are difficult to clearly determine from the available evidence due to broad patient populations and heterogeneous study designs, however a number of themes were noted in the literature review.

Article	Incidence	Severity	Predictor - duration	Predictor - age	Predictor - other	Instrumental Ax used
Skoretz (2010) Systematic review	**3-63%**	NA	**No consistent factors**	**Not discussed**		
Macht (2013)	**93%**	mild 34% moderate 26%, severe 33%	**Longer duration associated with increased severity of dysphagia**			16% underwent MBS
Macht (2011)	**84%**	mild 44%, moderate 23% severe 17%	**Longer duration associated with increased severity of dysphagia**			2.4% underwent MBS
Bordon (2011)	**41%**	NA	**Risk of dysphagia increased by 14% for each day of ventilation**	**Over 55 years had 2.5 fold greatest risk of post swallow dysfunction**		Bordon (2011) determined post swallow dysfunction using the PSD, which involves assessing people on two factors only i.e. coughing when drinking thick fluids and multiple swallows to clear oropharynx. PSD is not a validated Ax tool. Also Not stated if Ax completed by SP.
Skoretz (2014)	**5.6% across all intubation duration groups. 67.5% of pts who were intubated for >48hrs.**	NA	**Highest risk of extubation dysphagia occurred in pts who were intubated for > 48 hrs**	**Every 10 year increment increased the incidence of dysphagia**	**Reintubation Re-operation Post op AF**	

Overall findings

While the findings from the initial systematic review conducted in 2009 appeared equivocal, later evidence is suggestive of themes in relation to incidence and predictors of post extubation dysphagia. Incidence of post extubation dysphagia was reported in all four studies, ranging from 41-93%, while prolonged intubation and increasing age were both identified as predictors of dysphagia. Although the overall evidence base was classified as low, and design flaws were noted, a number of the studies included large sample sizes which gives strength to their results.

Where to ?

- Undecided
  - Studies covered different clinical populations
  - Evidence is ‘suggestive’ rather than ‘compelling’
- Given the number of participants in the studies and that the evidence is ‘suggestive’, we should continue to consider the likelihood of oropharyngeal dysphagia post extubation and consider predictive factors including increasing age and duration of intubation
- Swallow screening

PICI

- **Indicator:** X% of adult inpatients with a tracheostomy referred to Speech Pathology commence oral intake prior to decannulation.
- **Definitions:**
- *"inpatients":* adult inpatients admitted to an acute hospital
- *"oral intake"*: food and/or fluids (includes ice chips) for practicing swallow function
- *"decannulation":* removal of the tracheostomy

Tracheostomy Education Day 2015

- Approximately 50 participants
- Metro, regional and interstate
- Sponsorship
- Positive feedback
- To be run again in 2017