


## Tracheostomy Special Interest Group

### Adult Case Study: Atypical Guillain-Barre Syndrome

Shannon Taylor



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## Case History

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- ❖ 76 year old male

Social history:

- Lives alone
- Socialises with friends
- High functioning

Previous medical history:


- Anxiety
- Essential tremor
- Recent nasal surgery




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## Acute admission

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- 17/11/20**  
Admitted to General Medicine ward
- 18/11/20**  
Videofluoroscopy
- 23/11/20**  
FEES with ORL registrar
- 2/12/20**  
Admission to ICU with rapid intubation and ventilation
- 09/12/20**  
Tracheostomy placed




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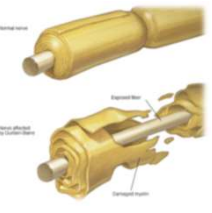
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## Pharyngeal–Cervical–Brachial Variant of Guillain-Barre Syndrome

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- **Pathophysiology:**
  - Autoimmune disorder
  - Exact cause is unknown
- **Diagnosis:**
  - Lumbar puncture, nerve conduction, diagnosis by exclusion
- **Clinical presentation:**
  - Guillain-Barre: symmetrical ascending flaccid muscle weakness with areflexia, +/- sensory symptoms.
  - Pharyngeal–Cervical–Brachial variant: rapidly progressive oropharyngeal and cervicobrachial weakness associated with areflexia in the upper limbs.
- **Treatment:**
  - Plasma exchange, intravenous immunoglobulin (IVIg)
- **Recovery:**
  - Variable - Typical recovery time 74-6 months to near normal.

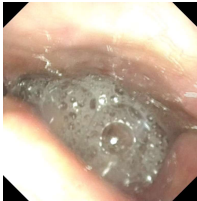
Walesby & Yuki (2014); Pradhan, Yadav & Yadav (2020)



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## ICU Admission



- **02/12/20**- Intubated and ventilated. Using low tech AAC.
- **09/12/20**- Tracheostomy inserted -Size 9 Portex Blue line Ultra
- **11/12/20**- half hourly tracheal & regular oral suctioning
- **14/12/20**- Advocated for FEES to guide cuff down sessions and recommended insertion of suction aid.
- **16/12/20**- Successfully weaned from ventilator. Intensivist led cuff down trial not tolerated.
- **17/12/20**- FEES. Improved ability to mouth words and write or point to alphabet board.

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## Transfer to the neurology ward

- **Mobility:** walking with lower walking frame with assistance of two
- **ADLs:** difficulty with self-care due to ongoing moderate proximal upper limb weakness
- **Swallowing:** Significant pooling of secretions, no visible pharyngeal movement on attempted swallows. Ongoing high tracheal suctioning requirements.
- **Communication:** Writing and mouthing
- **Speech:** Reduced jaw strength, full ROM (V), labial weakness L>R (VII), hyper-nasal speech, mild dysphonia (X), poor shoulder shrug (XI), Reduced tongue movements (XII). Mild-moderate dysarthria.
- **Mood:** Anxiety and low mood. At times verbally abusive to staff.
- **Pharmaceutical:** On multiple anticholinergic agents, medications for anxiety
- **Respiratory:** Peak expiratory flow rate 130L/min

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## Factors impacting tracheostomy wean

- **Primary issue**
  - Oropharyngeal dysphagia
- **Secondary issues / complicating factors**
  - Respiratory weakness (peak flow measures averaged 130L/min)
  - Anxiety
  - Cognition (ACE- 81/100)
  - Nursing staff tracheostomy knowledge
  - Rotating medical teams
- **Protective factors**
  - Mobilisation
  - Cognition

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## Weaning strategies

1. Upper airway re-sensitisation
2. Respiratory system strengthening
3. Pharmaceutical secretion management
4. Reducing risk factors for aspiration pneumonia

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## Approach 1: Resensitisation

**Goal:**  
to increase airway sensation to improve ability to recognise and actively respond to secretion load

**Indication:**  
pooling and silent aspiration of secretions.


**Interventions:**

- Restoration of airflow
- Stimulation
- Accountability

**Outcome measures:**

- FEES: NZSS, PAS scores, no. of swallows
- Reduced tracheal suctioning requirements
- Lower volume aspirates from subglottic port
- Length of time with cuff down

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## Approach 2: Strengthening

**Goal:**  
to increase respiratory, pharyngeal and laryngeal strength

**Indications:**

- Poor pharyngeal squeeze on forced "ee"
- Poor peak flow measures
- Inability to clear secretions with cough


**Intervention:**

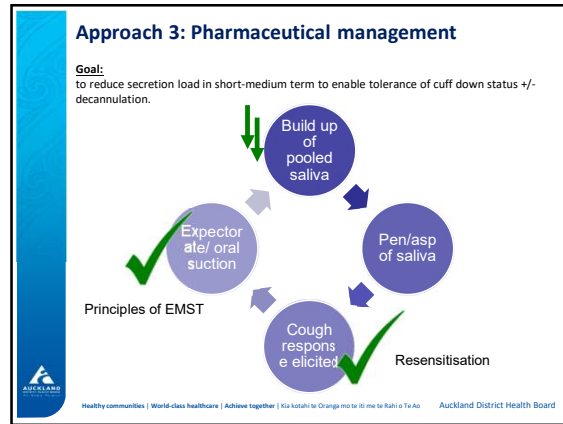
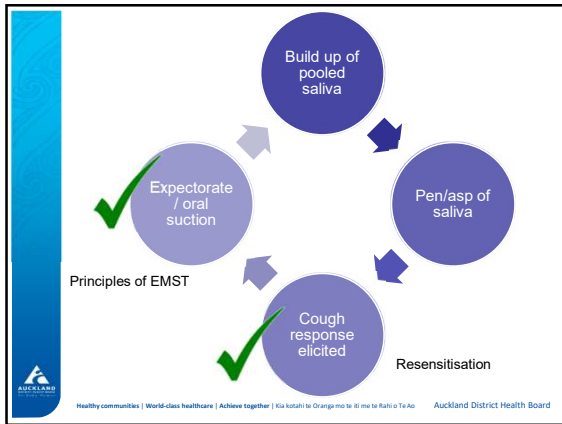
- slowly increasing one-way valve sessions
- Principles of expiratory muscle strengthening

**Outcome measures:**

- Peak flow measures
- Observed improvements in pharyngeal motility
- Observed improvements in cough strength

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- ### Approach 3: Pharmaceutical management
- Atropine drops**
  - Glycopyrrolate**
  - Hyoscine hydrobromide (Scopoderm patch)**
  - Ipratropium**
  - Amitriptyline**
  - Hyoscine butylbromide (buspan)**
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### Approach 3: Pharmaceutical management

**Atropine drops**

**Glycopyrrolate**

**Hyoscine butylbromide (buspan)**

Medicines Q&As | NHS | Specialist Community | UKMI

**Hypersalivation – what drug treatment options are available?**

Prepared by UK Medicines Information (UKMI) pharmacists for NHS healthcare professionals. Before using this Q&A, read the disclaimer at <https://www.sps.nhs.uk/articles/about-ukmi-medicines-q&as>.

Date prepared: 3<sup>rd</sup> April 2017

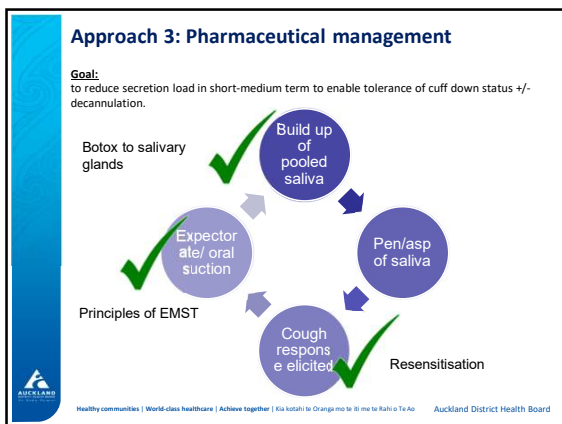
**Background**

This is the first of a series of five Q&A documents to address the drug treatment of hypersalivation. Links to the others are included in the 'Answer' section below.

Hypersalivation is the excessive production of saliva and may result in involuntary loss of saliva from the mouth, i.e. drooling or sialorrhoea (1,2). The pathophysiology of sialorrhoea is often not clear and in some cases, particularly neurological disorders such as cerebral palsy or Parkinson's disease, it is thought to be due to a poor swallowing mechanism and an inadequate rate of swallowing rather than increased saliva production (2-5).

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### Documenting Progress: FEES

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## VFSS approaching decannulation



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### Approach 4: Reducing risk factors

**Goal:**  
to be able to tolerate a degree of aspiration


**Indication:**  
Likely longer-term aspiration risk

**Intervention:**

- Oral hygiene
- Mobilisation
- Active chest clearance strategies
- Advanced care planning/ education

**Outcome measures:**


- WCC
- Febrile episodes
- Mucus production



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## Outcome


- Eating puree diet and thin fluids
- Continues to expectorate
- Due for repeat botox
- Head lifts
- Worse dysphonia



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## Discussion points

- Education and advocating prior to tracheostomy insertion
- EMST in tracheostomy weaning
- Decannulation trial without capping tolerance
- Subglottic port accuracy for inferring secretion load



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