Passy-Muir Special Event Webinar

Swallowing Series

Passy-Muir® Valve Use with the Head and Neck Cancer Population

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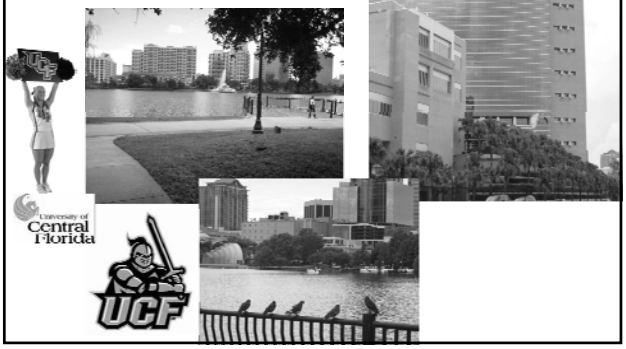
Where I'm From: Orlando, FL
MD Anderson Cancer Center



Head and Neck Cancer

- Refers to a collection of cancers arising from a variety of sites and grouped together under the following categories:

Oral cavity:
•Lips
•Buccal mucosa
•Anterior tongue
•Floor of the mouth
•Hard palate
•Upper gingiva
•Lower gingiva
•Retromolar trigone

Pharynx:
•Oropharynx
•Nasopharynx
•Hypopharynx

Larynx, :
•Supraglottic larynx
•Glottic larynx (true vocal cords and the mucosa of the anterior and posterior commissures)
•Subglottic

Head and Neck Cancer

Nasal cavity *and the* ***paranasal sinuses***:
•Maxillary
•Ethmoid
•Sphenoid
•Frontal sinuses

Major salivary glands:
•Paired parotids
•Submandibular
•Sublingual glands
•Minor salivary glands

Head and Neck Cancer

- Cancer of the head and neck can significantly affect a person's ability to:
  - Communicate
  - Breathe
  - Swallow

Head and Neck Cancer Staging

- The **tumor, node, metastasis (TNM)** staging system of the **American Joint Committee on Cancer (AJCC)** is used to classify cancers of the head and neck
  - **T** refers to the primary tumor T_1-T_4 , Tx, Tis
  - **N** stands for regional and local lymph nodes N_1-N_3
  - **M** refers to distant metastasis Mo vs. M_1

Head and Neck Cancer Staging

- The staging of the tumor is one mechanism that drives the treatment. Treatment can include one or more of the following options:
  - Surgery
  - Radiation therapy
  - Chemotherapy

Head and Neck Cancer Treatment: Factors influencing the treatment

- Location and its proximity to critical structures (functional deficits)
- Co-morbidities, candidacy for various tx options
- Previous treatment(s)
- Cost
- Patient preference
- Availability of support staff as needed
- Compliance
- Histology of the cancer
- Ability to provide the treatment in a particular facility

Challenges with Use of the Passy-Muir® Valve with the Head and Neck Cancer Population

- Timing of the need for tracheostomy is critical to Passy-Muir® Valve use with this population
- When is the tracheostomy necessary?
  - Prior to treatment
  - During the treatment
  - After the treatment

Tracheostomy ***Prior*** to Treatment

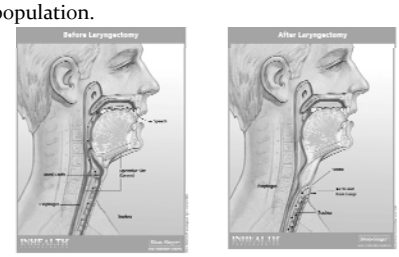
- When a head and neck cancer patient requires a tracheostomy *prior* to treatment, it is often due to a glottic or supraglottic tumor which limits airflow, necessitating an extra breathing passage.
- Passy-Muir®Valve is often contraindicated

Tracheostomy ***Prior*** to Treatment

- But not always!
- This patient came to our facility after a biopsy and tracheostomy with a Passy-Muir® Valve in place. He tolerated the valve without difficulty prior to treatment.
- Patient subsequently underwent total laryngectomy and therefore did not require post-treatment use.

Laryngectomy patients **cannot** use a Passy-Muir® Valve!

- Due to the anatomical changes associated with total laryngectomy, the Passy-Muir® Valve can not be used on this population.



Images Courtesy of InHealth Technologies.

Tracheostomy ***During*** Treatment

- Some large reconstructive surgeries result in significant edema of the oral cavity requiring tracheostomy for an additional airway until edema resolves or dissipates
- Passy-Muir® Valve *may be* contraindicated initially, but frequently recommended after edema dissipates

Tracheostomy ***During*** Treatment

- Treatment with various forms of chemotherapy and/or radiation can significantly affect the airway in both positive and negative ways during the course of treatment.

- ***Induction*** chemotherapy may be initiated as the first line of treatment to shrink large glottic/supraglottic lesions. Dramatic improvements in the airway shortly after the onset of induction chemotherapy can often be seen with large tumors.
- ***Concurrent*** chemoradiation may contribute to laryngeal edema at various points of treatment and the Passy-Muir®Valve may be contraindicated.

Tracheostomy ***After*** Treatment

- In some cases, a patient may have late effects from chemoradiation (especially a supraglottic/glottic cancer) which may result in significant edema and airway compromise

Introduction of the Passy-Muir® Valve

- A typical sequence of introducing the Passy-Muir® Valve is prior to the onset of a swallowing evaluation to "set the patient up for success"
  - Improved cough
  - Improved sensation through the glottis
  - Improved subglottic air pressure
- All other dysphagia strategies are then implemented to further improve the safety of the swallow (food management and postural strategies)

Case Study: BT

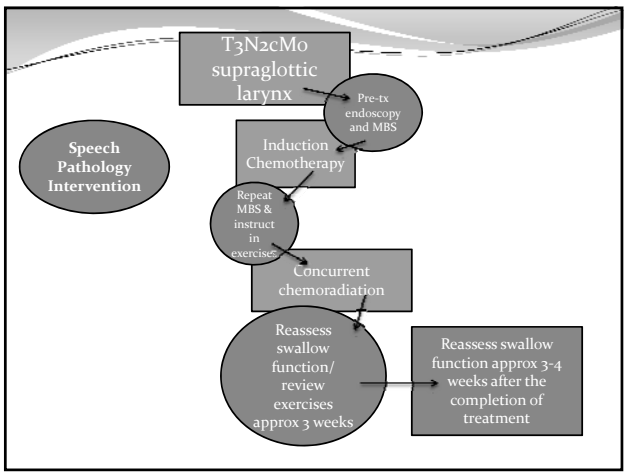
- T3N2cMo scca supraglottic carcinoma
- Lives in Puerto Rico-Spanish speaking only
- Biopsy and tracheostomy before coming for evaluation and treatment
- Passy-Muir® Valve introduced at time of videostroboscopy for videodocumentation

Pre-treatment MBS

- MBS completed to determine baseline swallow functioning
- MBS completed with Passy-Muir® Valve in place
- Results:
  - Functional swallow
  - Mildly reduced laryngeal elevation
  - Mild penetration of liquids
  - Recommended regular diet, wear Passy-Muir® Valve for meals

Treatment Plan

- Start with induction chemotherapy with TPF
- Follow with concurrent chemoradiation
- Can continue with oral intake of a regular diet at this time
- SLP to reassess swallow function after induction chemo therapy
- Patient given swallowing exercises prior to the onset of concurrent chemoradiation
- Patient to be seen for re-evaluation approximatley half way through concurrent chemoradiation



Pre-treatment exercises

- The goal of pre-treatment exercises is to preserve swallowing function and maximize functional outcomes at the completion of treatment.
- Specifically, the exercises target the base of tongue, the pharyngeal musculature, airway protection and laryngeal elevation.
- Patients are advised to practice each exercise in a series of 5 repetitions, three times a day as long they are able to. Realistically, certain early side effects may prohibit follow-through as instructed.

Post-induction chemotreatment videostroboscopy

- Results:
  - L TVC fully mobile
  - Slight improvement in R TVC
  - Improved glottic closure
  - No obvious mass effect
  - Significantly improved glottic airway
  - Consider capping trials, no trach removal (has upcoming concurrent chemoradiation)

SLP treatment during concurrent chemoradiation

- Continual monitoring of Passy-Muir® Valve use and swallowing functioning through treatment.
- The goal is to maintain nutritional status during treatment. The speech pathologist's goal would be to keep the nutrition oral versus feeding tube placement.
- This patient was able to maintain all of his nutrition PO throughout treatment but required diet modifications and postural strategies to remain safe and free from developing an aspiration pneumonia.

Post-Treatment MBS

- Results:
  - MBS done with Passy-Muir® Valve in place
  - Silent aspiration with thin liquids eliminated with chin tuck or use of nectar
  - Reduced epiglottic inversion with thins
  - Reduced hyolaryngeal elevation
  - Reduced BOT retraction towards the PPW
  - Stricture at C6
  - Recommendations: puree diet until dilation, crush meds, nectar thick liquids OR chin tuck with thin liquids

Conclusion

- The Passy-Muir® Valve can play an important role in treatment of the Head and Neck cancer patient by allowing verbal communication and assisting in swallow function
- The Head and Neck Cancer patient can fluctuate in communication and swallowing function at various points in the treatment process and subsequently requires constant monitoring and alterations in the treatment plan
- Ultimately this results in optimizing quality of life!

Questions and Conclusion

- Thank you for attending the webinar.
- ***Please complete your course evaluation for CEU credit.***

For additional questions, email:

- Linda Stachowiak lstachowiak@cfl.rr.com

Please Participate!

Quick & Important Research Survey

- Be part of understanding & working on standardizing dysphagia therapy in head & neck cancer patients.
- To do this, Dr. Susan Langmore and her team at Boston University Medical Center ask you to **please** take a 5-10 minute multiple choice survey.
- To take the survey, e-mail the survey coordinator william.sokoloff@bmc.org who will send you a link to the online survey. Your responses are truly invaluable!

Thank you!!!