[MUSIC PLAYING]

SPEAKER 1: Thank you, Dr. Johnson, and good morning. It's been a pleasure and a great experience being part of this multidisciplinary team. And I'm very grateful for the opportunity. This morning, I'm going to talk about the prevalence of dysphagia after treatment for head and neck cancer. And I would like to share what we've seen in our clinic for the first year.

So 68% of the survivors were seen by a speech-language pathologist for dysphagia. And the main group that we seem to be evaluating and treating are those with oropharyngeal cancer. They made up 52% of this group. And 22% were oral cancers. And then our third group that we have seen the most were laryngeal and hypopharyngeal tumors at 14%.

56% of these patients had a fiber optic endoscopic evaluation of swallowing. So if you're not familiar with that, it's a swallowing test that we can complete in clinics. It's done by passing a nasal endoscope through a patient's nose. And then we administer different consistencies of food, and we evaluate their swallowing function. The goal of the test is to determine if there's any strategies that we can help minimize some of their symptoms.

So patients that we see for this test are those that are going to have treatment-- chemoradiation treatment or radiation treatment. And again, we're getting a baseline swallow, and we're identifying swallowing strategies. We see those patients again one month after they complete their chemoradiation.

And we also see post-surgical patients. So those survivors are sent to us after their post-op visit by their ENT attending. And then we've seen a range of survivors, anywhere from one year post-treatment out to 30 years.

51% of the group that we saw were referred for speech-language pathology for swallowing therapy. And these patients were receiving a more structured program. So we identify patients before they're going to treatment. We get them set up with a therapist.

A lot of our patients are treated here in Hillman, so we have a therapist here at this site that will continue to work with these patients during their treatment process. When they're done with treatment, and if they have not met their optimal diet, or they still have a feeding tube in place, then we enroll them into another round of swallowing therapy.

And then any survivor that comes through our clinic that has a low-functional oral intake scale, meaning that they're not eating soft or regular foods, or they have a high E10 score, then we also enroll those survivors for additional therapy. 26% of this group were provided with a maintenance plan. And what that means is that these are the patients that may be pretty much holding their own. They are eating soft, regular textures. They might be doing pretty well, no major complaints.

We emphasize the importance of continuation of swallowing exercises. So we review those exercises with them, and we encourage them to do them for life. Post-treatment dysphagia has been reported to be about 50% to 60% of head and neck cancer cases. Yet others have reported that it actually may be more than this. So we may be missing it. And it's important, as clinicians and all of us here, that we look at the big picture, and that we consider other risk factors.

So I'd like to review a few of those that explain why dysphagia is prevalent with this group. Some patients will have pre-treatment dysphagia, and it depends on the location and the size of their tumor. So pre-treatment dysphagia has been associated with advanced tumor staging. It's also been associated with laryngeal and hypopharyngeal tumors. And we've also seen this in our survivorship clinic.

This study also looked at 81 patients. They went for modified barium swallows before, at three months, at six months. And what this study showed is that hypopharyngeal tumors had worse swallowing outcomes than oropharyngeal and laryngeal tumors, except for penetration or aspiration of thin liquids. So at six months, this group had post-treatment dysphagia that was either moderate or severe. And 50% of them required an enteral nutrition.

We also need to consider a few other factors. And that is before a patient begins their treatment. What is their baseline swallowing function? So if somebody is on a modified diet, we need to ask those questions of why that is. There are other comorbidities that are associated with dysphagia, such as neurological disorders-- strokes, COPD. And if a patient has this at baseline, their outcomes may not be the same as those that do not. So it's important that we pay attention to those things, as well as their age.

Post-surgical edema and anatomy changes are another factor that need to be considered. Immediately post-surgery, these patients experience pain and edema. There are anatomical and physiologic changes that can result in poor bolus formation, difficulty transfer of food.

So it's been reported that if less than 50% of the structure is taken, the swallowing problem will not be as severe. So in the picture to your left, that's a small T1 tumor. That patient will have some difficulty with transfer of food, but it's not going to be as significant or challenging as the picture on the right, with a T3 left oral tongue tumor.

And then patients that undergo a supraglottic laryngectomy for supraglottic cancer, they are at risk for aspiration during the swallow. They have decreased airway protection because, as you can see in the picture, they no longer have an epiglottis. So immediately post-op, these patients need to get trained with specific techniques by a speech-language pathologist. The goal was to help them maintain an oral diet safely, without aspiration.

And then there are treatment-related toxicities. So treatment-related toxicities can be acute or long term. The pictures on the left show you that this patient has ulcerations. They may experience thick mucus. And these acute changes disrupt normal swallowing function. As they get further out of their treatment, these patients then are challenged with fibrosis and stiffness. These changes impair their range of motion for swallowing function.

So there has been evidence that supports this that dysphagia post-chemoradiation therapy has resulted in decreased base of tongue retraction. It has decreased laryngeal elevation, leading to residue after the swallow. And there has been evidence to show that there's poor pharyngeal contraction reduced with propulsion to the esophagus.

During chemoradiation, patients also experience some other side effects, as well as altered taste and xerostomia that can begin as early as 25 gray. So not only are they battling with the ulcerations and the thick mucus, they also may experience fatigue. They may experience nausea, malnutrition. And all of these lead to weakness and atrophy of swallowing muscles.

Hutchison and group reported on late dysphagia after radiotherapy-based treatment of head and neck cancer. They looked at 29 patients, primarily oropharyngeal. Out of this group, there were 86% of the subjects in this study that were oropharyngeal. And their primary objective was to identify what the long-term outcomes were-- any survivor that was at least five years and greater.

And what the results of this study showed is that there was silent aspiration and profound pharyngeal residue, that 86% developed an aspiration pneumonia, and that 66% of the cases were G-tube-dependent. And then the last factor we need to keep in mind is that prolonged non-oral status also leads to severe dysphagia. And it has been associated with worse swallowing outcomes.

So this is a picture of a patient that we actually saw in clinic that was NPO for several years. And these thick secretions can lead to other problems. Aspiration can occur from the bacteria in these thick secretions. So our goal is not to keep these patients NPO. It's to keep them eating as much as we can.

So I'd like to conclude by saying that dysphagia can be an acute or long term complication for head and neck cancer patients. It's been reported to be patient-related. It can be tumor-related. It could be treatment-related. It's most prevalent with the most current treatment modality.

So even though we have shifted to organ preservation therapy, these patients still are challenged with dysphagia as one of the side effects. And it impairs quality of life, which is devastating for a lot of these survivors. In the worst case scenario, it could lead to an aspiration pneumonia and to a patient's death.

And it demonstrates a need for speech-language pathology intervention. So I would like to acknowledge and say special thanks to the team that I work directly with, with this patient group. They pick up all of our referrals, and they do a fantastic job. And thank you again for being part of this team. Thank you.