

# Oral Phase Swallowing Disorders

## Definition:

It is the inability to manipulate food and liquids in and through the mouth as a result of chewing difficulties, weaknesses and discoordination of tongue, and/or reduction in labial and buccal muscle tension and tone.

## Causes:

- 1- Impaired control of the tongue
- 2- Dental problems
- 3- Reduction in labial muscle tension and tone
- 4- Reduction in buccal muscle tension and tone

## Clinical features:

- 1- Extra effort or time needed to chew or swallow
- 2- Food stuck in the mouth
- 3- Inability to eat specific type of food
- 4- Spillage of food from the mouth
- 5- Drooling of liquids from the mouth
- 6- Residual of foods in the mouth after meal

## Types of Oral Phase Dysphagia:

### 1) Apraxia of Swallow; Reduced Oral Sensation:

- \* There is a loss of oral tactile agnosia for food and inability to organize the front-to-back lingual movement; however, the lingual muscles are normal.
- \* Clinical features →
  - Delayed oral onset of swallow.
  - The bolus is held in the mouth
  - No lingual movement.

### 2) Reduced Labial Tension/Tone:

- \* The bolus falls in the anterior sulcus when the oral phase of the swallow is initiated.
- \* Clinical features: →
  - Anterior mouth spillage of food and liquids
- \* Therapy plan:

#### Goal:

During chewing, the patient is able to maintain complete closure of the lips.

#### Rational:

To improve labial closure by increasing the strength and range of motion

#### Objective 1:

The patient is able to maintain a complete closure of the lips 80% accuracy when he/she is asked to stretch, to pucker, and then to bring the lips together tightly for 1 second.

#### Procedure:

- \* In 5 minutes session, the patient is asked to stretch the lips in the /i/ position as far as possible and holding in extreme extension for 1 second, and to pucker the lips as tightly as possible and holding for 1 second, and then to bring the lips together and holding tightly for 1 second. These exercises should be repeated 10 times a day.

- \* In 5 minutes session, by using tongue blade, the patient is asked to close the lips tightly around the tongue blade and hold it with the lips while the patient or the clinician attempts to extract it. This exercise should be 10 times a day.

**Objective 2:**

The patient is able to habituate complete closure of the lips 80% accuracy when he/she is asked to hold lip closure for one minute, which is gradually increased every day.

**Procedure:**

- \* The patient is asked to hold lip closure for 1 minute repeated 10 times a day. If the patient achieves 80% accuracy in that day, the schedule should be increased by 1 minute each day, until the patient reaches 10 minutes of closure 10 times per day for 10 days.

### 3) Reduced Buccal Tension/Tone:

- \* The bolus falls in the lateral sulcus when the oral phase of the swallow is initiated.
- \* Clinical features: →
  - Residual of food and liquids in the affected side
  - Spillage of food and drooling of liquids out of the mouth in the affected side.
- \* Therapy plan:

**Goal:**

During the chewing, the patient is able to compress the cheeks and lips against the teeth so that food will not fall in lateral sulcus.

**Rational:**

To improve buccal muscle strength and range of motion

**Objective:**

The patient is able to compress the cheeks and lips against the teeth when he/she is asked to do different ROM exercises for 80% accuracy in three consecutive trials during 5 minutes session.

**Procedure:**

- \* In 5 minutes session, the patient is asked to round the lips tightly for /u/ and to stretch the lips broadly for /i/. Then, the patient is asked to rapidly alternate between these two postures. This exercise should be repeated 10 times a day.
- \* In 5 minutes session, the patient is asked to pull the lips as far as possible to one side, holding in extension for 1 second, and then to the other, holding in extension for 1 second. This exercise should be repeated 10 times a day.

### 4) Reduced Tongue Control:

- \* The patient is unable to hold the bolus between the tongue and the hard palate when oral phase is initiated prior to the triggering of the pharyngeal swallow.
- \* There will be reduction in tongue elevation and tongue shaping.
- \* Premature bolus loss which is part of bolus breaks away from the main portion of the bolus and falls over the tongue base. However, during chewing food, premature loss of bolus into the valleculae is normal because the posterior oral cavity sealing by the soft palate is not maintained during chewing.
- \* Clinical features: →
  - Residual food on the floor of the mouth.
  - Residual of food on the tongue especially with food of thicker consistency.
  - Residual of food on the hard palate.

### 5) Lingual Discoordination:

- \* There will be disturbed anterior-posterior lingual movement (perstalsis).
- \* In Parkinson's Disease, there is a repetitive upward and backward movement of the central portion of the tongue, which may lasts 10 seconds or more the initiation of the swallow.

## 6) Tongue thrust:

- \* There is an abnormal hold position of the bolus against the central incisors while the tongue moves forward toward the central incisors pushing food from the mouth.

