Global Health Research

Master's 1st year student , Hasegawa Yoshiaki

HaaS : Chewing function measurement manual

1. the purpose

The oral cavity has various functions such as saliva secretion, swallowing, chewing, feeding, and articulation, and oral function is important for eating and human interaction. However, a decline in oral function can lead to decreased appetite, malnutrition, nutritional disorders, motor disorders, sarcopenia, social frailty, mental frailty, and decreased autonomy. As a result, it has become clear that oral health is related to health, and the concept of oral frailty has been born. Oral frailty includes a disease called oral hypofunction, which is diagnosed based on seven test items: poor oral hygiene, dry mouth, decreased bite force, decreased lingual and labial motor function, low tongue pressure, decreased masticatory function, and decreased swallowing function. If three or more of the seven items are decreased, oral hypofunction is diagnosed . In this study, the purpose of the study was to investigate the state of dry mouth in elderly people at Suginami Seikyo Clinic, and to measure the degree of mucosal moisture in the oral cavity. The purpose of the study was also to diagnose oral hypofunction by combining not only dry mouth but also other items.

1. procedure

The chewing ability of the xylitol chewing check gum is measured by visually comparing the reaction with a color chart. The measurement results are photographed and recorded using a smartphone or tablet device.

1. The product packaging is opened and the chewing check gum is handed to the subject.
2. Chewing check Chew the gum 60 times. Use a stopwatch to keep the pace at 1 time per second. (The color of the gum gradually changes to red as you chew it.)
3. After chewing, the gum is placed on the measurement board.
4. Visually compare the color with a previously printed color chart.
5. Take a picture of the gum with your smartphone/tablet camera.
6. important point
7. Before chewing

- Avoid use for 30 minutes after meals and brushing.

2) Chewing method

- Chew 60 times, once per second.

- You can chew on either the left or right side, or both.

- Chew so that your upper and lower teeth fit together firmly every time.

3) Color judgment after chewing

- After chewing, check the color of the gum as soon as possible, as the color may change over time.

1. How to evaluate and interpret the measurement results

The color chart that comes with the product classifies the gum colors into five levels, from green to dark red, and the measurement results are recorded on a scale from 1 to 5, with green (lowest chewing function) being 1.

⑤Safety

1) Sugarless gum that contains more than 50% xylitol as a sweetener.

2) Does not contain 28 specific allergens.

3) The gum base does not stick to teeth , so it can be used by people who wear dentures.

References

・Oral Care Co., Ltd. "Xylitol Chewing Check Gum Instruction Manual"

・Tokyo Medical and Dental University "About color-changing gum"