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United States IDDSI Reference Group Newsletter for October-November 2021

THIS MONTH'S RESEARCH ROUNDTABLE: A FOCUS ON PHARYNGEAL RESIDUE

Kyodo, R., Kudo, T., Horiuchi, A., Sakamoto, T., and Shimizu, T. (2020). Pureed diets containing a gelling agent to reduce the risk of aspiration in elderly patients with moderate to severe dysphagia. *Medicine*, 99. 1-5. <https://doi.org/10.1097/MD.00000000000021165>.

Of the many themes for the month of October, we chose to move away from talking about Halloween candy, ghouls, and ghosts to highlight the American Lung Association's focus on October being "Healthy Lung Month." As pharyngeal residue can contribute to post-swallow aspiration, our article selection this month is based on an interest in the contribution of thickening agents on pharyngeal residue. The article is based a research study completed out of Showa Inan General hospital in Japan that has used gelling agents to thicken pureed foods since 2016.

The main objective of the study was to evaluate the extent and clearance of pharyngeal residue following a trial of pureed rice with a gelling agent (or thickening agent as we refer to it in the States) as compared to pureed rice without a gelling agent (IDDSI Level 4 confirmed with testing methods). Sixty-two

hospitalized elderly patients (mean age: 83.9±9 years) with mild to severe dysphagia (56% moderate) underwent endoscopic swallowing evaluation. They were given a pureed rice with a gelling agent and a pureed rice without a gelling agent in a random order (i.e., randomized crossover trial). When needed, a green jelly was given to promote clearance of pharyngeal residue of pureed rice. The extent of pharyngeal residue after swallowing the pureed rice with or without jelly was evaluated using the cyclic ingestion score (0-4; similar to the Yale Pharyngeal Residue Scale). The participants were also asked if they sensed the residue in the throat by using a "Yes/No" question during the procedure.

The addition of the gelling agent (IDDSI level 4) significantly reduced the cyclic ingestion score. Participants who

received pureed rice with the gelling agent required fewer swallows with green jelly and displayed lesser frequency of vallecular and piriform sinus residue. However, the gelling agent did not significantly reduce the number of patients that displayed laryngeal penetration from residue. Reported sensation of the residue did not change as a result of adding the gelling agent, the participants gender, the presence of dementia, or the severity of dysphagia but was significantly related to age.

Based on the data analysis, the study suggests that the use of a gelling agent in a pureed food may help in reduction and clearance of pharyngeal residue in elderly patients with mild to severe dysphagia. An extension of these outcomes indicates that reduction of pharyngeal residue (i.e., improvement in pharyngeal clearance) may reduce a patient's risk of post-swallow aspiration, thereby reducing the risk of developing aspiration pneumonia. However, the use of a gelling agent may not be appropriate for reduction of pharyngeal residue in all patients with mild to severe dysphagia.

Utilization of IDDSI to classify their puree consistencies further aids in clinical application of the IDDSI in its most basic sense—that we are being consistent in labeling our texture modified foods using the categorization standards and testing measures provided by the IDDSI testing framework. This is consistent with Dr. Catriona Steele's recommendation in her recent webinar called "How to Use IDDSI in Research" (10/19/21) to avoid using alternative terminology, but confirm and state the texture modified food/drink as its confirmed IDDSI level, to avoid confusion and allow for consistency in understanding of research material. To view that webinar, you can go directly to

<https://youtu.be/P54SFQEJcJU> linked at the IDDSI YouTube channel. Happy haunting, and happy researching!