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**Laporan Kes / Case Report**

# Nutrition Management in Older Adults with Dysphagia and Underlying Possible Cognitive Decline: A Case Report

## Pengurusan Pemakanan Warga Emas yang Mengalami Disfagia dan Kemerosotan Kognitif: Laporan Kes

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## ABSTRACT

Aging is a complex biological process posing various physiological, psychological, and functional changes which impacts one's overall health and quality of life. This case report discusses the comprehensive management of an 88-year-old Malay man admitted due to acute kidney injury secondary to urinary retention and urinary tract infection along with significant weight loss, poor oral intake. The patient was further diagnosed with oropharyngeal dysphagia. Incorporating texture-modified diets (IDDSI Level 5), oral nutritional supplements, and caregiver education regarding safe feeding plus continuous monitoring were implemented to align with the patient's preferences, swallowing ability and health improvement. This case highlights the importance of early identification, individualized nutritional support, and collaborative care among dietitians, speech therapist and geriatric specialist in addressing dysphagia in elderly individuals to optimize health outcomes and improve quality of life.

Keywords: older adults, dysphagia, IDDSI, texture modification

## ABSTRAK

Penuaan adalah proses semula jadi kompleks yang menyebabkan pelbagai perubahan fisiologi, psikologi dan keupayaan seseorang, dan boleh menjejaskan kesihatan dan kualiti hidup. Laporan kes ini membincangkan tentang seorang lelaki Melayu berusia 88 tahun dimasukkan ke wad disebabkan kecederaan buah pinggang akibat kesukaran membuang air kecil dan jangkitan saluran kencing beserta penurunan berat badan yang ketara serta kurang pengambilan makan. Pesakit juga didiagnosis dengan masalah menelan (disfagia orofarinks). Pendekatan yang diambil bagi kes ini melibatkan pemberian makanan bertekstur lembut (IDDSI Tahap 5), suplemen pemakanan, serta pendidikan kepada penjaga mengenai cara memberi makan dengan selamat, di samping pemantauan berterusan. Kes ini menunjukkan kepentingan mengenal pasti masalah dari awal, menyediakan sokongan pemakanan yang sesuai, dan kerjasama dalam penjagaan pesakit di antara pakar dietetik, terapis pertuturan dan pakar geriatrik bagi meningkatkan kesihatan dan kualiti hidup warga emas.

Kata Kunci: warga emas, disfagia, IDDSI, ubah suai tekstur

## INTRODUCTION

Aging is a natural process that brings about various physiological, psychological, and functional changes, often taking a significant toll on overall health. As individuals age, their bodies undergo a decline in cellular regeneration and organ function, leading to reduced metabolic rates and alterations in the physicochemical properties of cells, resulting in impaired self-regulation and regeneration (Militello

et al. 2024). Muscle mass and bone density gradually decrease, increasing the likelihood of frailty and fractures (Sharma & Morishetty 2022) while the immune system becomes less efficient, making older adults more susceptible to infections. Cognitive changes, including memory loss and reduced processing speed, are also common, alongside sensory impairments that can affect vision and hearing (Virvescu & Fratila 2022). Furthermore, aging is often accompanied by social and emotional challenges, such as isolation and reduced independence, which can negatively impact mental health and quality of life (Gaspar et al. 2024). Older adults often face loneliness, social isolation, depression, anxiety, sleep disturbances, and stigma in seeking help, while also struggling with chronic diseases, physical limitations, low socioeconomic status, and poor living environments. These factors significantly reduce their mental health and overall quality of life (WHO 2023; Tan 2022).

Unintentional weight loss and poor appetite are common in older adults, with studies reporting that about 15–30% of community-dwelling elders experience appetite loss, 20% among frail or pre-frail groups, and nearly one in five older men showing significant weight loss over three years (Beaumont et al., 2024; Hernández-Galiot & Goñi 2017; Houston et al. 2021). Poor appetite often precedes unintentional weight loss, as reduced intake can lead to a decline in body weight, though some maintain weight due to lower energy expenditure; conversely, others lose weight despite normal appetite because of disease or malabsorption (Morley 2021; de van der Schueren et al. 2021).

Similarly, dysphagia is another critical concern among older adults in Asia, with prevalence rates varying across populations and settings. Recent studies in Asia have confirmed that dysphagia is a significant and growing problem among older adults. In Malaysia, a 2024 study at the Speech Pathology Clinic, Hospital Universiti Sains Malaysia reported a prevalence of 5.5% among adult clinic attendees, with markedly higher risk in those aged 61 years and above (Nordin et al. 2024). Another recent cross-sectional study among nursing home residents in Kuala Lumpur and Selangor identified swallowing difficulty in 50% of participants when assessed with the Standardised Swallowing Assessment tool (Siew & Chan 2023). Beyond Malaysia, a 2023 systematic review and meta-analysis reported that dysphagia affects about 40.6% of nursing home residents in Asia, reflecting a high regional burden compared with global pooled estimates (Chen et al. 2023). These findings underscore that dysphagia, much like appetite loss and weight loss, is highly prevalent among older adults and strongly associated with ageing, institutionalization, and chronic disease, ultimately compounding risks of malnutrition, frailty, and poorer quality of life.

Dysphagia, or difficulty swallowing, is one of the common conditions among the older adults, often resulting from age-related physiological changes, neurological disorders, or chronic illnesses. Dysphagia affects approximately 11.8% of community-dwelling older adults (Qiu et al. 2024). This condition poses significant challenges to nutritional intake, hydration, and overall quality of life, increasing the risk of malnutrition, dehydration, and aspiration-related complications (Yurt 2024, Hunter & Tulunay-Ugur 2024). Reduced appetite especially in older adults requires careful management to ensure adequate nutrition and safety. Early identification and intervention are essential to reduce risks associated with dysphagia (Liang et al. 2024). While dysphagia is often perceived as a normal part of aging, it is critical to recognize it as a significant health concern that requires proactive management to prevent serious complications and improve the quality of life for older adults.

The nutrition care process (NCP) for managing weight loss and dysphagia in older adults involves assessment, diagnosis, intervention, and monitoring. Assessment covers anthropometric measures, dietary intake, swallowing ability, comorbidities, and social factors, followed by diagnoses such as unintended weight loss due to inadequate intake or swallowing difficulty related to dysphagia. Interventions include energy- and protein-dense meals, oral nutrition supplements, texture-modified diets guided by the International Dysphagia Diet Standardisation Initiative (IDDSI), safe swallowing strategies, and collaboration with speech-language therapists, along with caregiver education and oral health management. Monitoring and evaluation focus on tracking weight, intake adequacy, tolerance to diet texture, hydration, and overall quality of life to support effective and individualized care (Academy of Nutrition and Dietetics 2020; Cederholm et al. 2022; IDDSI 2019).

The general objective of this paper is to present a comprehensive nutritional management approach for an older adults patient with dysphagia, emphasizing the importance of individualized care, multidisciplinary collaboration, and tailored dietary interventions to optimize nutritional status and enhance quality of life.

## CASE REPORT

### PATIENT PROFILE

Mr. A, an 88-year-old Malay man, was brought to the hospital over urinary incontinence as referred by his general practitioner and presented to the Emergency Department (ED) with a combination of symptoms that had gradually worsened over recent weeks. He reported a loss of appetite lasting two weeks, significant unintentional weight loss over the past year, and poor oral intake over the last week

TABLE 1 Full biochemical results.

| Parameter | Date | | | | Unit | Normal range |
|---|---|---|---|---|---|---|
| | Day 1 | Day 2 | Day 3 | Day 4 | | |
| **Full Blood Count** | | | | | | |
| WBC | 7.58 (N) | 5.71 (N) | 5.87 (N) | - | $x10^9$/L | 4.0-11.0 |
| Hb | 11.6 (L) | 12.6 (N) | 10.9 (L) | - | g/dL | 12-15 |
| Plt | 235 (N) | 223 (N) | 222 (N) | - | $x10^9$/L | 110-450 |
| **Renal Profile** | | | | | | |
| Urea | 38.6 (H) | 14.9 (H) | 7.0 (H) | 4.3 (N) | mmol/L | 2.5-6.7 |
| Sodium | 132 (L) | 140 (N) | 142 (N) | 139 (N) | mmol/L | 136-145 |
| Potassium | 5.1 (N) | 4.6 (N) | 5.0 (N) | 4.5 (N) | mmol/L | 3.5-5.1 |
| Chloride | 92 (L) | 105 (N) | 106 (N) | 107 (N) | mmol/L | 98-107 |
| Creatinine | 792(H) | 155(H) | 88 (N) | 77 (N) | mmol/L | 50-98 |
| Calcium | 2.30 (N) | 2.34 (N) | 2.18 (N) | 2.16 (N) | mmol/L | 2.1-2.55 |
| Phosphate | 1.94 (N) | 0.73 (L) | 0.61 (L) | 0.59 (L) | mmol/L | 0.74-1.52 |
| Magnesium | 1.10 (H) | 0.99 (N) | 0.88 (N) | 0.76 (N) | mmol/L | 0.66-1.07 |
| **Liver Function Test** | | | | | | |
| Total protein | 76 (N) | 81 (N) | - | - | g/U | 64-83 |
| Albumin | 29 (L) | 29 (L) | - | 23 (L) | g/L | 35-50 |
| Total bilirubin | 19 (N) | 15 (N) | - | - | Ummol/L | 3.4-20.5 |
| ALP | 120 (N) | 181 (N) | - | - | U/L | 40-150 |
| ALT | 40 (N) | 49 (N) | - | - | U/L | 0-55 |
| AST | - | 75 (N) | - | - | U/L | 5-34 |

Additionally, he experienced a fever for three days, abdominal pain, and an inability to pass urine for one week.

Mr. A was diagnosed with acute urinary retention (AUR) secondary to a urinary tract infection (UTI) and acute kidney injury (AKI) caused by the AUR. Notably, Mr. A had no prior history of medical illnesses and no previous hospital admission. He remained physically mobile and independent in most activities of daily living, such as feeding, dressing, bathing, and toileting. However, he has had visual and hearing impairments for the past two years.

He is married with 5 children and lives together with his 78-year-old wife, who is ADL-independent despite being on a pacemaker, and his second son, a 59-year-old with a mental disability who is also ADL- independent. His wife prepares his meals and serves them for him to eat. Currently, he is financially supported by his children and a government fund.

He was accompanied by his daughter in the ward, with his wife alternating visits to provide support. He was able to communicate effectively and respond to questions during interactions. However, he exhibited signs of forgetfulness,

particularly regarding his location, providing inconsistent answers when asked where he was. Further evaluation revealed possible underlying cognitive decline, evidenced by a history of short-term memory loss, such as forgetting meals, misplacing belongings, and occasionally struggling with his signature. This information was obtained through the Comprehensive Geriatric Assessment (CGA) with input from family members. The Mini-Mental State Examination (MMSE) was also attempted but could not be completed due to the patient's lack of cooperation.

## ANTHROPOMETRY

Mr. A was unable to undergo standard weighing due to instability and a high risk of falls. As an alternative, knee height and mid-upper arm circumference (MUAC) measurements were used to estimate his height and weight (BAPEN 2011, Shahar & Pooy 2003). His estimated height is 158 cm, confirmed by his daughter, and his estimated weight is 40 kg. Estimated values were used as the patient was at high risk of falls, and direct measurement of weight and height was not conducted during admission. Although his daughter could not quantify his previous weight, she observed significant weight loss over the past year, particularly since last week. Based on the ideal body weight for older adults, defined as a BMI of 24 kg/m² according MDG for Older Persons 2023, his target weight was calculated to be 59.9 kg.

## BIOCHEMICAL DATA

Mr. A's biochemical data upon admission reflected several abnormalities that progressively improved during his hospital stay. His full blood count showed fluctuating hemoglobin levels, with mild anemia occasionally noted, while platelet counts and white blood cell counts remained within normal ranges. Renal function tests revealed severe acute kidney injury (AKI) on the first day of admission with a markedly elevated creatinine level of 792 µmol/L, which progressively normalized to 77 µmol/L by the next two days. Similarly, urea levels were initially elevated at 38.6 mmol/L but improved to 4.3 mmol/L within three days. Electrolyte imbalances were evident, with low sodium (132 mmol/L) and chloride (92 mmol/L) on the first day, which normalized by the next day, while potassium remained within normal limits throughout.

His phosphate levels were consistently low (0.73-0.59 mmol/L) during admission, and albumin levels were persistently low (23-29 g/L), indicating poor nutritional status or chronic inflammation. Liver function tests showed normal total protein and bilirubin levels but revealed a slight elevation in ALT (49 U/L) and AST (75 U/L), which remained within acceptable limits. Alkaline phosphatase (ALP) was elevated at 181 U/L, reflecting possible underlying liver or bone involvement. Magnesium levels were slightly elevated initially (1.10 mmol/L) but normalized over subsequent days (Refer Table 1).

## NUTRITION-FOCUSED PHYSICAL FINDINGS

Mr. A exhibited moderate muscle and fat loss, with no edema. His blood pressure of 144/56 mmHg is relatively high, while other vital signs are stable, with a heart rate of 83 bpm, oxygen saturation of 98% on room air, and a temperature of 37°C. On day 5 of admission, his input-output balance showed a deficit of -521 mL (I/O: 1279/1800). He had one bowel output classified as type 7 on Bristol Stool Chart the day before, which might be due to the lactulose prescribed. It was confirmed by the nurse and family members that the patient has had no bowel output since admission. Other than that, there was no evidence of vomiting. According to his daughter, Mr. A had poor oral intake and reduced appetite for the past 2 weeks. Mr. A was noted to have dentures for over 10 years and a hoarse voice, which had been present for the past five years. He had no trouble as his dentures were intact. His daughter also reported no history of choking episodes or pain during swallowing. The doctor did suggest an endoscopy to further examine his hoarse voice, but his daughter firmly stated that the children had discussed and disallowed the procedure due to their father's old age.

## FOOD AND NUTRITION HISTORY

Mr. A has been on a soft diet since day 1 of admission. The texture was consistent with his usual intake, as the patient usually has his fish deboned or shredded. However, he only managed to finish 3-4 tablespoons of porridge and occasionally finished ¼ of the protein sources, mainly egg or fish. His daughter reported that Mr. A prefers fish and eggs to chicken. Additionally, it is noted that his daughter and wife often bring outside food such as biscuits, red bean pau, and milk tea. However, his beverage choices are predominantly sugary drinks, including milk tea purchased daily by his daughter, while plain water consumption is minimal. During his stay, the nurse prepared 200 ml of oral nutritional milk upon his request for a sugary drink the previous night, which he could finish. In the past, his daughter said that his father did not drink milk. His favorite food is fried noodles (mee), and he often buys a pack, finishing gradually at lunch until dinner.

The estimated daily intake from oral consumption in the ward is approximately 300 kcal and 10.5 g of protein, supplemented by 262 kcal and 10.5 g of protein from oral nutritional support (ONS). This results in a total daily intake of 562 kcal and 21 g of protein. Considering his ideal body

weight (IBW) of 54 kg, his total intake falls significantly below his estimated requirements. His energy needs are 1485-1650 kcal/day (27-30 kcal/kg/day), and his protein needs are 64.8-81 g/day (1.2-1.5 g/kg/day) (ESPEN Geriatric 2021). As his renal profile is currently improving, the protein requirements are only considered for geriatric patients and not for acute kidney disease. Additionally, his fluid requirements are approximately 2.0 litres per day, emphasizing the gap between his intake and nutritional requirements.

## NUTRITION DIAGNOSIS

Inadequate protein-energy intake related to decreased ability to consume sufficient intake due to reduced as evidenced by estimated energy intake only achieved 37% of energy requirement, and protein intake only achieved 31% of protein requirement.

## NUTRITION INTERVENTION

The nutrition intervention aims to provide quality of life and minimize nutritional impact symptoms. The patient will be provided with a soft diet at IDDSI Level 6, which includes soft and bite-sized, and with additional protein to make it high protein. A cup of high-protein jelly will also be included during lunch to enhance protein intake meeting the requirement.

The International Dysphagia Diet Standardisation Initiative (IDDSI) provides a standardized framework for classifying food textures and liquid consistencies to ensure safe swallowing and adequate nutrition for individuals with dysphagia. The IDDSI framework consists of eight levels (0–7), ranging from thin liquids (Level 0) to regular foods (Level 7). The patient's prescribed IDDSI Level 6 diet, known as Soft and Bite-Sized, includes tender and moist foods cut into small pieces that are easy to chew and swallow, reducing the risk of choking while maintaining meal enjoyment and nutritional adequacy.

To further support the patient's nutritional needs, oral nutritional supplement (standard dilution) will be incorporated into the feeding plan, with three servings per day: one at breakfast (8 a.m.), one during evening tea (3 p.m.), and one pre-bed (10 p.m.). Each serving will consist of 6 scoops ONS of 185 ml of water, providing a total volume of 230 ml per serving. This will contribute an estimated 786 kcal/day, 31.5 g of protein/day, and approximately 700 ml of fluid/day. This also achieved 50% of his requirement plus fluid intake from the ONS will help maintain hydration and electrolyte balance.

## NUTRITION MONITORING AND EVALUATION

Key parameters for monitoring include his dietary intake to assess whether he can tolerate and consume the provided meals. Additionally, adherence to the prescribed oral nutritional supplements (ONS) will be evaluated, ensuring they are administered at the recommended times and in the prescribed volumes. Finally, regular monitoring of his biochemical data, such as renal profile and full blood count, will be conducted to track his nutritional and overall health status.

## OUTCOME AND FOLLOW-UP

During follow-up day 1, Mr. A was reviewed by the speech therapist and diagnosed with oropharyngeal phase dysphagia, exacerbated by behavioral issues, particularly food refusal. The assessment revealed several challenges during the oral and pharyngeal phases of swallowing. During the oral phase, Mr. A exhibited anterior loss while drinking from a cup and prolonged oral holding. In the pharyngeal phase, he experienced delayed swallowing, coughing when consuming thin liquids, and throat clearing after drinking milk. However, Mr. A was uncooperative and refused to eat bread, only having a minimal amount, which resulted in an incomplete assessment. The speech therapy team plans on allowing a minced-moist diet and thin, liquid at IDDSI Level 1. They also planned to educate on safe swallowing strategies and safe hand-feeding techniques.

Mr. A had received a soft diet (IDDSI Level 6) and 1 cup of ONS as prescribed in the morning. According to his daughter, he had finished the milk. During lunch, it was observed that he consumed only 25% of the hospital-provided diet, complaining of a dislike for the taste and describing it as too plain. The patient did, however, successfully finish the high-protein jelly provided. After that Mr. A consumed a home cooked meal brought by their wife, consisting of moist rice with shredded fish. He was able to finish around 1.5 exchanges of rice and ½ exchanges of the fish, indicating a preference for familiar, well-seasoned foods.

The observation also revealed Mr. A's eating behavior. It was noticed that Mr. A had difficulty visually perceiving the food on the plate, leading to scooping large portions of food at a time, which sometimes he did not scoop anything at all. The daughter had to lead her father to identify the food beforehand. The patient also ate at a fast pace, frequently taking bites at short gaps which another one before finishing chewing or swallowing previous ones. Similarly, drinking was observed to be rushed, with the patient not pausing between sips. Apart from that, there was no other significant anthropometric or biochemical data.

A new nutritional diagnosis did emerge which is, Swallowing difficulty related to motor causes associated with aging as evidenced by oro-

pharyngeal dysphagia and speech therapy findings resulting in prolonged oral hold and delayed swallowing.

Through a multidisciplinary discussion, the nutritional goals of Mr. A remain to optimize energy and protein intake, prevent further weight loss, and maintain hydration and electrolyte balance with an additional goal which is to encourage proper feeding techniques to avoid aspiration, coughing or choking episodes.

A soft, high-protein diet at IDDSI Level 5 was intended for Mr. A to accommodate his swallowing needs. This included the addition of one cup of high-protein jelly daily. The prescribed feeding regimen of oral nutritional supplements (ONS) was to be continued, requiring six scoops of Ensure Gold mixed with 185 ml of water, producing a total volume of 230 ml per serving, to be provided three times a day. A constant monitoring was needed to look out for any signs of aspiration or choking episodes. As Mr. A was on plan to be discharged, a practical and feasible plan is needed to ensure nutritional needs are met at home. This could be achieved by discussing with the caregivers, mainly his wife and daughter, so it is within their capability. Firstly, his wife and daughter were instructed to ensure that all foods provided adhere strictly to IDDSI Level 5 standards, focusing on texture and consistency to support safe and comfortable swallowing. Foods must be soft and moist but free from any liquid leaking or dripping. They should not require biting and need minimal chewing, ensuring Mr. A can consume them with ease. Any lumps present should be no larger than 4mm and small enough to be mashed easily with the tongue. Plus, the food should be soft enough to be mashed effortlessly with a fork using minimal pressure and should hold its shape when scooped onto a fork without crumbling or dripping. For liquid, his current drink, such as milk tea and balanced formula, could both be considered as already slightly thick liquids, which is IDDSI level 1.

For example, to modify the texture of his favorite food, fried noodles (mee) to meet IDDSI Level 5 standards, cook the noodles until they are very soft and tender, slightly overcooking if necessary to ensure they can be mashed with minimal effort. Cut or chop the noodles into short, uniform lengths no larger than 4mm or use a food processor to achieve a consistent texture. Add a small amount of broth, sauce, or water to keep the noodles soft and moist, ensuring no liquid leaks or drips from the dish.

If the caregivers could not perfectly adhere to the texture modification, safe feeding techniques and safe swallowing strategies should be emphasized and given extra detail (Cichero et al. 2017; Swan et al., 2023). Firstly, it is encouraged that Mr. A should be supervised at all mealtimes to monitor his swallowing safety and ensure that any signs of difficulty, such as coughing or throat clearing, can be promptly addressed. Feeding should be conducted at a slow and controlled pace, with small amounts of food or liquid offered per swallow. Using a teaspoon to deliver food or a small straw for liquids was advised to regulate the volume and prevent overloading his mouth. It is encouraged for Mr. A to be fed to effectively control both volume and eating rate. Mr. A should always be seated upright at a 90-degree angle during meals, with his head and neck aligned to reduce the risk of aspiration. Supportive cushions or devices could be used if he requires additional postural stability. After eating, he should remain in the upright position for at least 30 minutes to allow sufficient time for digestion and to minimize the risk of reflux or choking (Cichero et al. 2017).

All in all, it is strongly encouraged that adherence to IDDSI Level 5 food preparation at home, along with the consistent practice of safe swallowing and feeding strategies, be carried out together to achieve better, greater outcomes. Moreover, it is recommended that Mr. A be provided with Oral Nutritional Supplements (ONS) at least twice daily to help top up his nutritional intake. These combined efforts will support his dietary needs and enhance his safety and quality of life.

## DISCUSSION

Mr. A's case highlights the complexities of managing oropharyngeal dysphagia, a condition characterized by impaired swallowing mechanisms that increase the risk of aspiration, malnutrition, and dehydration. In such cases, a multidisciplinary approach involving dietitians, speech-language pathologists (SLPs), and caregivers is vital to ensure both nutritional adequacy and swallowing safety.

Dysphagia often leads to reduced oral intake due to discomfort, fear of choking, or fatigue during meals, making nutritional intervention crucial. For Mr. A, adopting a diet consistent with IDDSI Level 5 (Minced & Moist) ensured that food was soft and easily mashable, reducing the effort required for chewing and swallowing while minimizing aspiration risks. Thickened liquids were also employed to slow liquid flow, providing better control and facilitating safe swallowing.

The use of The International Dysphagia Diet Standardization Initiative (IDDSI) framework is beneficial and truly crucial as it provides a standardized approach to texture-modified diets and thickened liquids, ensuring that food and fluids are specifically per Mr. A's needs. The IDDSI framework reduces confusion associated with non-standardized texture classifications, ensuring that patients receive appropriate food textures that match their swallowing capabilities (Sella- Weiss 2022). Studies indicate a 46% increase in overall IDDSI compliance post-intervention in aged care settings, demonstrating its effectiveness in enhancing meal

safety (Wu et al. 2022). Practical methods like the syringe flow test and fork drip test are also user-friendly for caregivers and patients, although they may lack precision for industrial applications (Hadde et al. 2022).

Despite its advantages, implementing IDDSI guidelines comes with challenges. Preparing texture-modified meals that adhered strictly to IDDSI standards required careful attention and effort from caregivers, thus ensuring that Mr. A's wife and daughter were adequately trained to prepare IDDSI Level 5 meals and recognize swallowing risks which needed significant time and resources. Misinterpretation of texture requirements or improper thickening could risk Mr. A's safety. According to Chadwick et al. (2006), caregivers often struggle with modifying food and drink consistencies, achieving proper positioning during meals, and using appropriate support and prompting strategies. Limited staff awareness, insufficient training, and lack of regular auditing also hinder effective IDDSI adoption in aged-care facilities (Wu et al. 2021). Mealtimes can also be time-consuming, requiring caregivers to invest time and energy in supervision. Namely, time pressures, staff turnover, and inadequate review of management strategies have always been significant factors complicating adherence to dysphagia care recommendations (Low et al. 2022; Lim et al. 2023; Miles et al. 2024).

Finally, enhanced caregiver support is essential for sustaining long-term care. Support groups or counselling services can address the emotional and physical challenges caregivers face when managing a dysphagia patient. Providing this support is critical for maintaining adherence to complex feeding regimens and preventing caregiver burnout, ultimately ensuring better outcomes for both the patient and their family.

A collaborative multidisciplinary approach plays a vital role in ensuring the effectiveness of dysphagia management among older adults. In this case, the speech therapist was responsible for assessing the patient's swallowing function and recommending the appropriate IDDSI diet level to ensure the food texture matched his swallowing ability. The geriatric specialist oversaw the patient's overall medical condition, hospitalization plan, and coordinated best practices to support recovery. Meanwhile, the staff nurses contributed significantly by assisting during feeding sessions and preparing nutritional formulas such as milk mixtures according to the prescribed texture and portion. Consistent communication among these disciplines helps ensure that nutrition, safety, and comfort are maintained throughout the patient's care (Cichero et al. 2017; Swan et al. 2023).

The patient's cognitive decline further complicated his feeding process. He was often unable to remember his eating pattern, leading to irregular intake and confusion during meals. On some occasions, he scooped food portions that were too large or attempted to feed himself when the spoon was empty, likely due to memory loss and visual impairment. These behaviors highlight the importance of close supervision, patience, and providing verbal or visual cues during mealtime to guide safe swallowing and ensure adequate food consumption (Chen et al. 2021; Swan et al. 2023).

Moving forward, reinforcing staff and caregiver education on feeding techniques, portion control, and texture consistency is essential. Regular review by the dietitian and speech therapist, along with family involvement, can enhance adherence and safety. Internationally, countries such as Japan and the United Kingdom have demonstrated success through structured dysphagia care models. Japan's Dysphagia Rehabilitation Program integrates dietitians, nurses, and speech-language pathologists in daily meal supervision, while the UK's NHS Dysphagia Pathway emphasizes early screening, standardized IDDSI implementation, and interdisciplinary collaboration (Japanese Society of Dysphagia Rehabilitation, 2021; National Health Service [NHS] 2023). Adapting similar practices within local healthcare settings could improve the quality, safety, and continuity of dysphagia care for older adults with cognitive decline.

## CONCLUSION

Mr. A's case highlights the management of dysphagia within the framework of IDDSI guidelines. Ensuring adherence to texture-modified diets and safe feeding practices is crucial for maintaining his safety and optimizing his nutritional status. A multidisciplinary approach that includes personalized care plans, collaboration with caregivers, and support from innovative technologies can significantly enhance both patient outcomes and caregiver well-being. However, barriers such as caregiver fatigue, inadequate training, and limited resources must be addressed in the implementation of IDDSI. Ultimately, improving dysphagia management in Malaysia requires greater investment in training, awareness, and infrastructure to ensure that patients like Mr. A receive comprehensive, sustainable, and culturally appropriate care.

## CONSENT

Verbal consent has been obtained from the patient.

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## DECLARATION OF CONFLICT OF INTERESTS

The authors declared no potential conflicts of interest concerning the preparation and publication of this article.

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