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Care situation for swallowing disorders in nursing homes - challenges and necessities

Care status of swallowing disorders in nursing homes – challenges and necessities

A healthy person swallows up to 2000 times a day without thinking about it. Ageing processes jeopardise the sufficiency of the act of swallowing: swallowing disorders in nursing homes are underdiagnosed, their effects underestimated, yet their complications are the most frequent cause of death there. A closer look reveals a devastating picture of care. This paper outlines the current challenges of data inaccuracy, the lack of diagnostic and therapeutic care and outlines possible innovative forms of care and their implementation in a care pathway to be developed.

Keywords

dysphagia, unmet needs, speech and language therapy, nursing home, dementia

Dysphagia is a frequently underdiagnosed consequence of dementia (up to 95%) (Dziewas & Pflug et al. 2020), which often goes unnoticed by those around the patient and is probably not always recognised by those affected, and is the cause of a higher risk of complications and life-threatening conditions (Baijens 2016, Namasivayam & Steele 2015): Dysphagia-related malnutrition and dehydration as well as aspiration pneumonia and the need for enteral feeding, among other things, lead to increased and repeated hospital admissions with stressful interventions, longer hospital stays and the likelihood of being discharged to rehabilitation facilities and nursing homes instead of home after hospitalisation (Altmann 2010). Even medication taken with the intention of improving the condition becomes a risk: chemical pneumonitis is the result of aspirated medication, leading to odynophagia due to mucosal damage in the swallowing route, viral or fungal-associated oesophagitis due to immunosuppressants. Compensatory functions can be impaired, particularly in old age and as a result of multiple medications (Schwemmle et al. 2015). Untreated pneumonia can also exacerbate existing coronary heart disease and trigger other acute cardiac syndromes or death from sepsis.

>> Depending on the diagnostic procedure, the prevalence of dysphagia in nursing home residents varies between 15% (assessment by nursing staff) and 70% (diagnosis using various procedures) (Artiles et al. 2021). Other studies specify these results by explaining lower prevalence values as the result of clinical observations (32-45%) and higher prevalence values as the result of instrumental examinations (84-93%) (Affoo et al. 2013).

Challenge no. 1: Data uncertainty

Initial cross-sectional analyses can confirm a prevalence of approx. 90% in Styrian nursing homes with non-instrumental clinical in-house examinations (e.g. Bergthaler 2022). Hospital stays are no guarantee that previously unrecognised dysphagia will be diagnosed in care homes. In 2021, Ilija registereda positive post-deglutitive phonation testin eight out of 43 patients in an Austrianhospital, a clear indication of an unrecognised impairment of the swallowing act.

Despite the lack of clarity, the data is clear: all studies indicate that dysphagia is very common in care homes and is often underdiagnosed and undertreated (Baijens et al. 2016). Mira and colleagues

Background: Swallowing disorders

Die The immediate fatal consequence of a swallowing disorder, bolus death, was already described in 1973: Three patients on a geriatric ward died not from acute cardiovascular disease as stated in the cause of death, but from obstruction of the airway due to aspiration and subsequent hypoxaemic hypoxia. This circumstance was identified at the time by autopsy (Gelperin, Abraham 1973). Currently, bolus death is 0.3% of causes of death according to death certificates and 0.2% of institutionalised and non-institutionalised geriatric patients according to autopsies (Schulten et al. 2022).

However, swallowing disorders can lead to death not only due to obstruction of the airways: Swallowing disorders (dysphagia) are an insufficient separation of the intersecting respiratory and feeding pathways and, by definition, result from an existing or perceived functional impairment of one of the structures involved in the act of swallowing or their interaction. The swallowing act can be impaired in any of its voluntary and reflexive phases of food comminution and food transport (Pschyrembel 2023). Common, but not mandatory, symptoms of dysphagia include (1) throat clearing, (2) coughing1and (3) choking during or after fluid and/or food intake as well as leakage of fluids or food from the mouth or nose; complications include malnutrition and recurrent pneumonia following tracheobronchial aspiration (Panebianco et al. 2020). Due to the complexity of the swallowing act, symptoms of an insufficient swallowing act also regularly occur in healthy people, typically when the automated process is disturbed in the form of distractions (Christmas & Rogus-Pulia 2019). This example illustrates that as simple as the definition is, the complex orchestration of the widely distributed cortical and subcortical representation, the five cranial nerves involved and the 26 pairs of muscles is just as susceptible. This multitude of involved structures makes the act of swallowing susceptible to numerous diseases (Malagelada 2015): central nervous diseases such as strokes (initial 50%) or severe craniocerebral trauma (50%), but also inflammatory processes or tumours can cause dysphagia2. The sufficiency of the act of swallowing is particularly at risk due to ageing.

1: Coughing is a laryngeal protective reflex and cleansing mechanism. Coughing, even if it is and becomes associated with the unpleasant process of swallowing, should therefore be supported and not prevented; prompting to cough voluntarily is indicated if aspiration is suspected.

2: AWMF guidelines for clinical pictures with which dysphagia is associated treat dysphagia as a symptom or complication of the respective underlying disease. The guidelines S1 Neurogenic dysphagia 030-111 and S3 Oropharyngeal dysphagia due to head and neck tumour disease - diagnosis and treatment 049-016 deal with this topic independently and not as an accompanying symptom.

conclude their review on dysphagia in dementia as follows: 'It is considered essential to understand the true prevalence of dysphagia in dementia so that policy makers and clinicians can intervene early and reduce the burden on healthcare systems. That no current study exists on the prevalence of dysphagia in AD may also mean that this comorbidity is underdiagnosed and not cited as a leading cause of death from pneumonia in patients with dementia.' (Mira et al. 2022) However, any effort to improve the care situation of age-related diseases must fight against the socio-demographic development (prevalence of dementia in Germany 2019: approx. 1.7 million, 2050: approx. 2.8 million | Switzerland & Austria 2019: approx. 140,000, 2050: approx. 308,000).

Challenge no. 2: Diagnosis and diagnosis of dysphagia

The theoretical gold standard for assessing the act of swallowing is functional endoscopic evaluation of swallowing (FEES), an instrumental diagnostic tool for assessing the structures involved in swallowing and their function with the aim of recognising swallowing disorders, assessing their severity and deriving possible interventions. Parts of the medical profession regard the performance of FEES as a reserved medical activity, but the legal situation clearly categorises it as an activity that can be delegated, in contrast to this subjective view: The rhino-laryngoscope is a medical device within the meaning of Section 3 (1a) of the Medical Devices Act and its use is the practice of medicine in accordance with Section 1 of the Medical Practitioners Act. The German Federal Court of Justice has clarified that certain medical activities can be delegated unless they require medical expertise due to their difficulty or danger, also in response to the shortage of doctors.

The FEES is neither difficult to perform nor dangerous when learnt and can therefore be delegated without fail in the sense of a care-related possibilism. The evaluation of swallowing with a flexible endoscope (OPS code 1-613) was billed 34,266 times for inpatients in 2022 (Destatis 2022). At the same time, 270,000 strokes and 1.8 million people with dementia are counted in Germany every year. Even in hospitals, objective swallowing diagnostics are apparently carried out far too rarely. In care homes, it remains a pipe dream.

Traditionally, dysphagia is recognised on the basis of fever as a sign of resulting pneumonia. However, 20% of 80-year-olds do not show a fever in acute pneumonia. Alternatively, the sufficiency of the swallowing act is often assessed by water swallowing tests and multi-consistency tests. What these methods have in common is that they are standardised (if at all) for stroke-associated dysphagia and are also used by non-logopaedic staff, e.g. nurses. The well-known Daniels predictors (Daniels et al. 2000), which are often incorrectly combined with water swallowing, also predict dysphagia after an insult, not in the case of dementia. For age-associated dysphagia, there is no standard beyond the FEES for diagnosis; speech therapy expertise is the highest level of evidence available. But: Speech therapists have appeared in the bottleneck analyses in Austria and Germany since 2018, assessed in 2021 with high bottleneck indicators despite the absence of age-related changes such as retirement waves. Increasing risk indicators for the future supply, also due to the lack of substitutability potential3, together with the socio-demographic development, predict a dramatic worsening of the current under- or undersupply.

Challenge no. 3: speech therapy care

In a survey of care home managers, care service managers and ward managers from all public and private care homes in Styria (n = 221, response rate n = 58, 26%), the prevalence of dysphagia was dramatically, but not surprisingly, underestimated at 15% (Ofner 2022). This survey also revealed: 0% employed speech therapists in the homes, in 40% of cases theoretical cooperation with consultant speech therapists, but speech therapy interventions only took place in 28% of cases. In summary, speech therapy care was rated as expandable (41%) and inadequate (36%), despite the underestimated prevalence! How disastrous the balance of care would be if the actual need acted as a normative factor.

The reasons preventing adequate speech therapy care were, on the one hand, the lack of availability of speech therapy staff and, on the other, funding. Speech therapy care in Styria is characterised by a dramatic shortage of staffed practices (n = 3). All of the other approx. 220 speech therapists are either employed by institutions and are not available to the homes or are speech therapists of choice, for whose consultations on average 50% of the fees are paid privately and are not reimbursable. However, the remuneration of around EUR 100 per intervention, which is appropriate for this specialised activity, is beyond the financial resources of institutionalised pensioners: On average, EUR 493.084 remainsfor all costs of everyday life that go beyond accommodation, care and full board: Clothing, visits to the hairdresser, toiletries, attention for the grandchild, newspapers, all other things that enrich, facilitate and cheer up life. The costs of speech therapy are covered by health insurance companies in Germany, but the practice of prescribing it is characterised by uncertainties: long-term prescriptions are accompanied by concerns about recourse on the part of the prescribers.

Necessity No. 1: Development and evaluation of innovative procedures

The idea of using cervical auscultation to listen to the act of swallowing and analyse its auditory correlate is not new. Analyses that have attempted to correlate a systematic change in the soundscape with specific diseases or symptoms have so far failed. However, this granularity is not necessary to merely initiate a chain of interventions: Bacher (2022) showed that pathological swallowing can be dichotomously distinguished from physiological swallowing by listening without subsequent analysis. Regular listening to swallowing by trained personnel could be implemented almost budget-neutrally, with the exception of familiarisation.

Other initial results show that the assessment of mimic muscles by speech therapists (Bergthaler 2022) correlates with abnormalities in clinical swallowing examinations. The charm of such an approach: no compliance, no adherence, not even situational orientation is required. The development of such procedures is urgently needed; there

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3: Federal Employment Agency, Statistics/Labour Market Reporting, Reports: Focus on the Labour Market - Skilled Labour Shortage Analysis 2021, Nuremberg, May 2022.

4: *20% of pensions (on average 12/2021 = EUR 1462.00/month, 14x/year, m 1948.00; f 1174.00) + 10% care allowance level 3 (on average 12/2021 = 50.28) remain even if care home costs exceed income (on average 03/2023: EUR 130.00/day + care-dependent costs).*

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is currently no standardised protocol and no comparative values for the assessment of swallowing function in old age.

Many risk factors and triggers for dysphagia are known, but systematic efforts to predict dysphagia with the idea of providing the earliest possible care are few and far between. A Spanish hospital has now reported that a machine learning-based system uses the available electronic health data to calculate the risk of dysphagia for all admitted elderly patients (Martin-Martinez et al. 2022). The level of innovation in this process lies less in technical aspects - the known predictors are quickly ticked off - and more in the systemic anchoring of dysphagia prediction.

In addition to diagnostic procedures, the existing curative procedures must also be scrutinised, for example the still inadequate evidence base for dysphagia therapy, including with regard to dose (Krisciunas et al. 2017) and, less considered metatheoretically to date, patient adherence. Eating is pleasure gain, diminished by texture modifications as well as by influencing the social component of each meal (Krekeler et al. 2018).

Necessity no. 2: Implementation of care pathways

In addition to broad social awareness, an institutionalised care pathway for dysphagia needs to be established and implemented as a key instrument for providing information, management, care and data collection so that the above-mentioned interventions can also be applied. The pathway must be able to adapt to individual diagnoses, the duration of the illness and personal circumstances. The main purpose is to recognise needs, prevent undetected underuse and ensure optimal care. These care pathways are structured as a clearly defined sequence of tasks that can be implemented cooperatively by different organisations. In contrast to purely clinical pathways, they have cross-institutional and supra-regional references (cf. Kirchen-Peters, Stausberg 2023) and therefore require an overarching commitment to establishment and implementation.

The end goal should not just be a visual map of care facilities or a simple, predefined schedule. Instead, it should be a digital signpost that is characterised by its specific and adaptable care options and offers a variety of choices. It is essential to discuss the need for guidance or at least an introduction to the use of these pathways in terms of case management. Ethical questions must not be ignored: Who bears responsibility if an algorithm adapts parts of the pathway based on user input? This pathway must not be defined as a minimum standard, but must be based on evidence.

A first step: interdisciplinary collaboration

The best possible care can only be achieved in a multi-/inter-/disciplinary/professional way with the reference carer as the hinge between needs and requirements and care options and necessities (Noe et al. 2021). The current care situation has the potential to cause moral offence to this professional group: It is aware of the consequences of speech and language therapy underprovision, but is unable to change this ethically reprehensible circumstance (May et al. 2022, Ofner 2022). Initial approaches are therefore aimed at expanding the tools available to carers, honing their skills in dealing with dysphagia and implementing easy-to-implement interventions. The Geriaplus5 projectaims to detect changes in nutritional status. Since 2023, carers have been receiving specialist training on care options from the fields of speech therapy and dietetics. Driven by the desire to improve the care situation, various disciplines and professions are working together here. This is the only way. <<

5: https://www.yumpu.com/de/document/read/305906/editorial-senecura, accessed 06/12/2023

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