Intensive Care Med
https://doi.org/10.1007/s00134-020-05937-3

LETTER

Dysphagia in the intensive care unit: a (multidisciplinary) call to action

Patrick Zuercher[1*], Rainer Dziewas[2] and Joerg C. Schefold[1]

Dear Editor,

With great interest we read the recent excellent article by Dr Brodsky [1] on post-extubation dysphagia (PED). We agree that we as intensivists are indeed daily confronted with patients recently extubated and struggling with swallowing difficulties. This is underlined by recent prospective data indicating that likely more than one out of six ICU patients admitted for emergency reasons and one out of ten mixed (medical-surgical) adult ICU patients are affected by PED [2]. Numbers in the acute neurologically ill may even be higher. However, when keeping respective incidences in mind, it should be noted that some additional ICU patients are typically subjected to direct tracheostomy, i.e. the total number of patients affected by PED is likely higher. Importantly, the consequences of PED positivity in mixed adult ICU patients embrace higher resource need, longer ICU and hospital length of stay, and an about 9% excess 90-day mortality rate [2]. Nevertheless, it seems of striking importance that dysphagia is currently not systematically screened for on most ICUs [3]. Thus, dysphagia currently appears a largely under-recognized but highly relevant clinical problem in the ICU.

Underlying mechanisms leading to dysphagia on the ICU are currently not conclusively understood [1, 4]. However, we agree with Dr Brodsky [1] that the pathogenesis of dysphagia may involve multiple mechanisms and that (bedside) nurse screening in the ICU may play a pivotal role in recognizing respective signs and symptoms of dysphagia. In addition, it should be noted that there is currently considerable variability in screening and diagnosing of dysphagia [3, 4], which partly impedes comparing of available data and may trigger uncertainty in ICU physicians caring for affected patients.

In line with Dr Brodsky's notion, intensivists should support systematic screening for dysphagia on the ICU. We thus recently proposed a pragmatic (currently not formally validated), feasible, and structured 2-step diagnostical algorithm ("Bernese ICU Dysphagia Algorithm", Fig. 1). Following a "safety check", trained ICU-nurses perform a Water Swallow Test (WST, details in [2]) within few hours from extubation. Screening-positive cases are subjected to a clinical expert exam (e.g. by speech-language therapists or trained physiotherapists). Ideally, this should be complemented by a confirmatory instrumental test using flexible endoscopic evaluation of swallowing (FEES). FEES can be performed at the bedside, does not involve patient transfer or radiation exposure [4], and was shown safe and readily applicable in the ICU setting even when performed by less experienced professionals. With regard to treatment, even less data seems available. Pharyngeal electrical stimulation (PES), which was shown to improve swallowing and airway safety in tracheostomized stroke patients [5] might also be beneficial in the treatment of PED and this is currently investigated in the PhINEST trial (https://clinicaltrials.gov/ct2/show/NCT03840395).

Indeed, dysphagia on the ICU currently seems a largely under-recognized but highly relevant clinical challenge. We thus support the notion for an international multidisciplinary expert panel that aims to establish consensus (e.g. using a Delphi procedure) on dysphagia definitions, ICU screening and assessment algorithms, therapeutic procedures, and on recommendations for future research.

*Correspondence: patrick.zuercher@insel.ch
[1] Department of Intensive Care Medicine, Inselspital, Bern University Hospital, University of Bern, 3010 Bern, Switzerland
Full author information is available at the end of the article

Springer

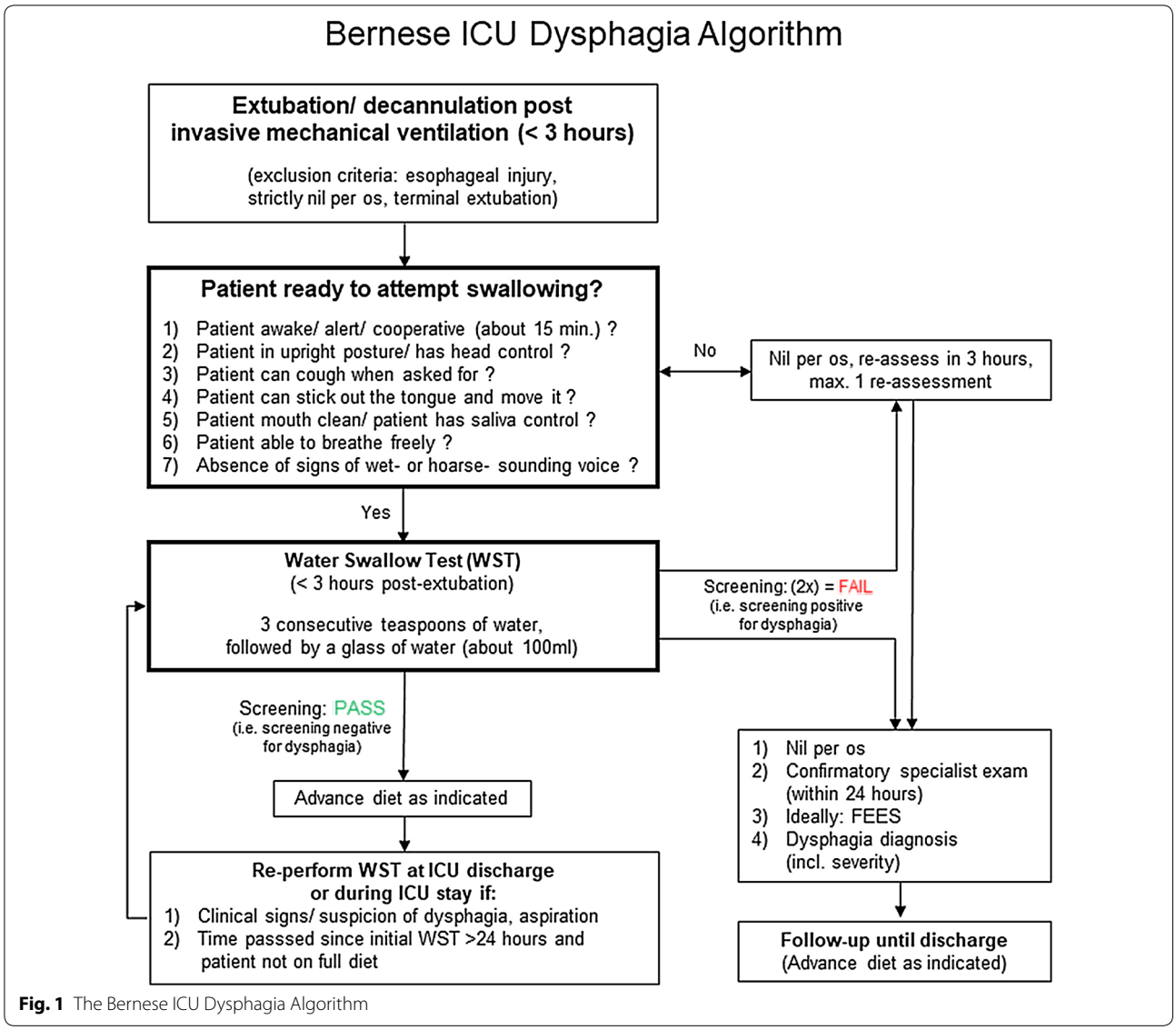

Fig. 1 The Bernese ICU Dysphagia Algorithm

Author details
[1] Department of Intensive Care Medicine, Inselspital, Bern University Hospital, University of Bern, 3010 Bern, Switzerland. [2] Department of Neurology, University Hospital Münster, Münster, Germany.

Compliance with ethical standards

Conflicts of interest
The Department of Intensive Care Medicine (PZ, JCS) has/ had research & development/ consulting contracts with (full disclosure): Orion Corporation, Abbott Nutrition International, B. Braun Medical AG, CSEM SA, Edwards Lifesciences Services GmbH/ SA, Kenta Biotech Ltd, Maquet Critical Care AB, Omnicare Clinical Research AG, and Nestlé. Educational grants have been received from Fresenius Kabi; GSK; MSD; Lilly; Baxter; Astellas; AstraZeneca; B. Braun Medical AG, CSL Behring, Maquet, Novartis, Covidien, Nycomed, Pierre Fabre Pharma (Roba Pharma), Phagenesis, Pfizer, Orion Pharma. No personal financial gain resulted from respective development/ consulting contracts and/or grants. JCS is principle investigator of the PHINEST study. The University Hospital Münster received case money in the PHAST TRAC-trial and the "Pharyngeal electrical stimulation for treatment of neurogenic dysphagia: a European Registry (PHADER)" study. RD has received travel expenses in his role as principal investigator in PHAST-TRAC and PHADER from Phagenesis Ltd. RD also received honoraria for serving as a consultant for Nestlé Health Science and worked as non-paid adviser for the company Phagenesis Ltd.

Publisher's Note

Accepted: 12 January 2020
Published online: 29 January 2020

References

1. Brodsky MB, Pandian V, Needham DM (2020) Post-extubation dysphagia: a problem needing multidisciplinary efforts. Intensive Care Med 46(1):93–96. https://doi.org/10.1007/s00134-019-05865-x
2. Schefold JC, Berger D, Zurcher P, Lensch M, Perren A, Jakob SM, Parviainen I, Takala J (2017) Dysphagia in mechanically ventilated ICU

patients (DYnAMICS): a prospective observational trial. Crit Care Med 45(12):2061–2069
3. Marian T, Dunser M, Citerio G, Kokofer A, Dziewas R (2018) Are intensive care physicians aware of dysphagia? The MAD(ICU) survey results. Intensive Care Med 44(6):973–975
4. Zuercher P, Moret CS, Dziewas R, Schefold JC (2019) Dysphagia in the intensive care unit: epidemiology, mechanisms, and clinical management. Crit Care 23(1):103
5. Dziewas R, Stellato R, van der Tweel I, Walther E, Werner CJ, Braun T, Citerio G, Jandl M, Friedrichs M, Notzel K et al (2018) Pharyngeal electrical stimulation for early decannulation in tracheotomised patients with neurogenic dysphagia after stroke (PHAST-TRAC): a prospective, single-blinded, randomised trial. Lancet Neurol 17(10):849–859