



ESSD Videofluoroscopic Swallowing Study (VFSS)

Pre-congress course Muenster 2024

Faculty:

Stefanie Duchac

Daniele Farneti

Andrea Hofmayer

Peter Pokieser

Martina Scharitzer

Renée Speyer

Virginie Woisard

Who is the course suitable for?

Health care professionals from the multi-disciplinary team of dysphagia management with interest in the interpretation and reporting of videofluoroscopic swallowing studies.

Format: Lectures, workshop, case presentations

Learning Outcomes

At the end of this course, participants will be able to

- Identify the anatomical structures and the signs and symptoms of dysphagia using VFSS in the adult population
- Recognize and understand the roles of MDT professionals in the conduct and analysis of VFSS
- Be aware of the technical basics, safety procedures and the requirements for performing VFSS in the adult population
- Interpret the normal and abnormal swallow response in VFSS and plan management accordingly
- Utilize VFSS assessment findings to inform clinical decision making.

The course is not intended to authorize participants to perform VFSS independently.

Onsite Program

DAY 1		MONDAY		
TIME	DURATION	CONTENT	CONTENT DETAILS	WHO?
09.00	30	Welcome & Introduction	Introduction of participants (incl questionnaire experience)	Martina Scharitzer Virginie Woisard
09.30	30	General basics	Scope of VFSS; Indications + contraindications for VFSS, history taking in the MDT	Andrea Hofmayer
10.00	45	Normal I	Oral, pharyngeal and esophageal transit (including ageing)	Peter Pokieser Virginie Woisard
10.45	15	COFFEE		
11.00	45	Normal II	Norm data in the metrics (timing, space, velocity, flow variables)	Daniele Farneti
11.45	75	HANDS-ON I	HANDS ON: normal VFSS: oropharyngeal	Martina Scharitzer + faculty
13.00	45	LUNCH		
13.45	45	Tailored examination	Volumes, number of trials, consistencies, position of patient, measures	Renée Speyer
14.30	60	How I do it	How to do the investigation: the VFSS environment	Stefanie Duchac
15:30	15	COFFEE		
15.45	30	Tailored examination	Using protocols: pros and cons	Andrea Hofmayer
16.15	45	HANDS-ON II	normal VFSS: entire swallowing tract + individual variance	Peter + Martina + faculty
17:00		End of Day	Discussion, concluding remarks	Martina Scharitzer Virginie Woisard
DAY 2		TUESDAY		
TIME	DURATION	CONTENT	CONTENT DETAILS	WHO?
09.00	30	The diagnostic study	Pathology I: Oral and pharyngeal phase	Martina Scharitzer
09.30	75	HANDS-ON IV	Analysis of VFSS videos in <i>small groups</i> : oropharyngeal	Martina + Peter + faculty
10.45	15	COFFEE		
11.00	30	The diagnostic study	Pathology II: pharyngoesophageal segment + esophagus	Peter Pokieser Martina Scharitzer
11.30	60	HANDS-ON V	Analysis of VFSS videos in <i>small groups</i> : PES + esophageal + all phases combined	Martina + Peter + faculty
12.30	30	Therapeutic strategies	Protective, provocative and therapeutic strategies during VFSS	Andrea Hofmayer
13.00	45	LUNCH		
13.45	45	VFSS report	How to build a patient report based on VFSS (SLP & other health professionals) – MDT	Andrea Hofmayer + Martina Scharitzer
14.30	60	HANDS-ON VI	Analysis of VFSS videos in <i>small groups</i> – therapeutic strategies	Andrea + Stefanie + faculty
15:30	15	COFFEE		
15.45	45	HANDS-ON VII	Analysis of VFSS videos in <i>small groups</i> – complex cases (15 min each)	Europe Team + faculty
16.30	30	Conclusion	How to implement VFSS in your department	Stefanie Duchac
17:00		End of Day	Feedback	Martina Scharitzer Virginie Woisard

Pre-recorded lectures for online education prior to the onsite-course

VFSS - anatomical basics

VFSS – technical basics

and links to follow the webinars of the ESSD are accessible through

<https://sites.google.com/view/w36s1ccs12g1ma8l6imwi32/>

Screening and assessment of oropharyngeal dysphagia	Renée Speyer
Fiberoptic Endoscopic Evaluation of Swallowing: Pathophysiological and clinical implications in the pediatric population	Daniele Farneti
Dysphagia and multiple etiologies	Eric Verin
Oropharyngeal dysphagia as a geriatric syndrome	Pere Clavé
Videofluoroscopy of multilevel swallowing disorders	Peter Pokieser
Videofluoroscopic diagnostic case studies: interactive work up	Peter Pokieser
Videofluoroscopy of multilevel swallowing disorders: case presentations	Peter Pokieser
Zenker diverticulum: diagnosis and treatment	Laura Baijens
FEES_Phenotypes of Neurogenic Dysphagia- Theoretical Background and Practical Considerations	Rainer Dziewas

Suggested literature

This list includes backup reading material references and links for open access papers.

Recommended book:

- Dysphagia: diagnosis and treatment, 2nd edition. Springer. Ekberg O
- Evaluation and treatment of swallowing disorders. 2nd Edition. Austin, TX: Pro-Ed Inc; 1997. Logemann JA
- Videofluoroscopy: a multidisciplinary team approach. Plural Publishing. San Diego. Newman, R & Nightingale J.

Additional books for introduction into the topic:

- Dysphagia Assessment and Treatment Planning: a Team Approach, 4th edition Plural Publishing. Rebecca Leonard, Katharine Kendall.
- Dysphagia. Clinical management in adults and children, 3rd edition. Elsevier. Michael E. Groher and Michael M. Crary

Open access literature:

1) Basics - Oropharyngeal dysphagia. Theoretical background.

- Speyer R, Cordier R, Farneti D et al. White Paper by the European Society for Swallowing Disorders: Screening and Non-instrumental Assessment for Dysphagia in Adults. *Dysphagia* (2022) 333-349
- Matsuo K, Palmer JB. Anatomy and physiology of feeding and swallowing: normal and abnormal. *Phys Med Rehabil Clin N Am*. 2008 Nov;19(4):691-707
- Souza LR, Oliveira MVM, Basile JR, et al. Anatomical and Physiopathological Aspects of Oral Cavity and Oropharynx Components Related to Oropharyngeal Dysphagia. <https://www.intechopen.com/books/4545>
- Costa MMB. Neural control of swallowing. *Arq Gastroenterol*. 2018 Nov;55Suppl 1(Suppl 1):61-75.

- Baijens et al, 2016. European Society for Swallowing Disorders – European Union Geriatric Medicine Society white paper: oropharyngeal dysphagia as a geriatric syndrome. Baijens LW, Clavé P, Cras P, et al. Clin Interv Aging. 2016; 11: 1403–1428.
- Newman et al, 2016. Effect of Bolus Viscosity on the Safety and Efficacy of Swallowing and the Kinematics of the Swallow Response in Patients with Oropharyngeal Dysphagia: White Paper by the European Society for Swallowing Disorders (ESSD). R. Newman, N. Vilardell, P. Clavé, and R. Speyer Dysphagia. 2016; 31: 232–249.

2) VFSS – Background, complementary instrumental assessment

- Jones J. Collaboration Comes Standard. ACR Imaging 3. [https://www.acr.org/-/media/ACR/Files/Case-Studies/Quality-and-Safety/CollaborationComesStandard/Imaging3_CollaborationComesStandard_March2018-\(1\).pdf](https://www.acr.org/-/media/ACR/Files/Case-Studies/Quality-and-Safety/CollaborationComesStandard/Imaging3_CollaborationComesStandard_March2018-(1).pdf)

3) Procedure of VFSS

A. Equipment, technical requirements and radiation aspects

- Peladeau-Pigeon M, Steele CM. Technical Aspects of a Videofluoroscopic Swallowing Study. Canadian Journal of Speech-Language Pathology and Audiology. 37: 216-226
- Earl VJ, Badawy MK. Radiation Exposure to Staff and Patient During Videofluoroscopic Swallowing Studies and Recommended Protection Strategies:290-297
- Bonilha HS, Humphries K, Blair J, et al. Radiation exposure time during MBSS: influence of swallowing impairment severity, medical diagnosis, clinician experience and standardized protocol use. Dysphagia 2013;28:77-85
- ALARA principle: further information on link www.eu-alara.net

B. Specific published VFS protocols for conducting and interpretation of the examination.

- Martin-Harris B, Brodsky MB, Michel Y, et al. MBS measurement tool for swallow-impairment—MBSImp: establishing a standard
- Hutcheson KA, Barrow MP, Barringer DA, et al. Dynamic Imaging Grade of Swallowing Toxicity (DIGEST): Scale development and validation. Cancer 2017. 123:62-70
- Huckabee ML. New Zealand Index for Multidisciplinary Evaluation of swallowing. <http://fliphtml5.com/nfqj/zyar>
- Steele CM, Peladeau-Pigeon M, Barbon CAE, et al. Reference Values for Healthy Swallowing Across the Range from Thin to Extremely Thick Liquids. J Speech Lang Hear Res 2019. 21:1338-1363
- Benfield JK, Michou E, Everton LF, et al. The Landscape of Videofluoroscopy in the UK: A Web-based Survey. Dysphagia 2021. 36:250-258

C. The therapeutic study. Compensatory strategies

- Nagy A, Peladeau-Pigeon M, Valenzano T, et al. The Effectiveness of the Head-Turn-Plus-Chin-Down Maneuver for Eliminating Vallecular Residue. Codas 2016;28:113-117
- Gramigna GD. How to perform video-fluoroscopic swallowing studies. GI Motility online 2006; <https://www.nature.com/gimo/contents/pt1/full/gimo95.html>

D. Processing the information of the diagnostic, physiologic and therapeutic VFS study. The report (*not open access*)

- Bülow M. Videofluoroscopic Swallow Study: Techniques, Signs and Reports. Nestlé Nutr Inst Workshop Ser, vol 72, pp43-52
- Schoeppe F, Sommer WH, Haack M, et al. Structured reports of videofluoroscopic swallowing studies have the potential to improve overall report quality compared to free text reports. Eur Radiol 2018. 28:308-315

- Cocks N, Ferreira H. What information do UK speech and language therapists use when making oral versus nonoral feeding recommendations for adults with oropharyngeal dysphagia? *Dysphagia* 2013;28:43-57

E. Pediatric videofluoroscopic swallowing study

- Jana Jančíková, Denisa Bezděková, Petra Urbanová, et al. Association between Swallowing-Related Questionnaire Responses and Pathological Signs on Videofluoroscopy in Children. *Children (Basel)* 2021 Dec; 8: 1109
- Patrick Stafler, Khaled Akel, Yuliana Eshel, et al. Videofluoroscopy compared with clinical feeding evaluation in children with suspected aspiration. *Acta Paediatr.* 2022 Jul; 111: 1441–1449
- Ana Maria Hernandez, Esther Mandelbaum Gonçalves Bianchini. Swallowing Analyses of Neonates and Infants in Breastfeeding and Bottle-feeding: Impact on Videofluoroscopy Swallow Studies. *Int Arch Otorhinolaryngol.* 2019 Jul; 23: e343–e353
- Lenie van den Engel-Hoek, Imelda J.M. de Groot, Bert J.M. de Swart, et al. Feeding and Swallowing Disorders in Pediatric Neuromuscular Diseases: An Overview. *J Neuromuscul Dis.* 2015 Nov 20; 2: 357–369
- Benjamin Thompson, Jennifer P. Lundine, Lauren Madhoun, et al. Standardization of Radiologic Procedures for Pediatric Videofluoroscopic Swallow Studies: A Service-based Quality Improvement Initiative. *Pediatr Qual Saf.* 2018 Nov-Dec; 3: e123
- Arvedson JA, Brodsky L, et al. *Pediatric Swallowing and Feeding: Assessment and Management.* Plural Publishing Inc; 3. Edition, ISBN-13: 978-1944883515