Interrater reliability of the Volume- Viscosity Swallow Test in acutely admitted older medical patients

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Aim

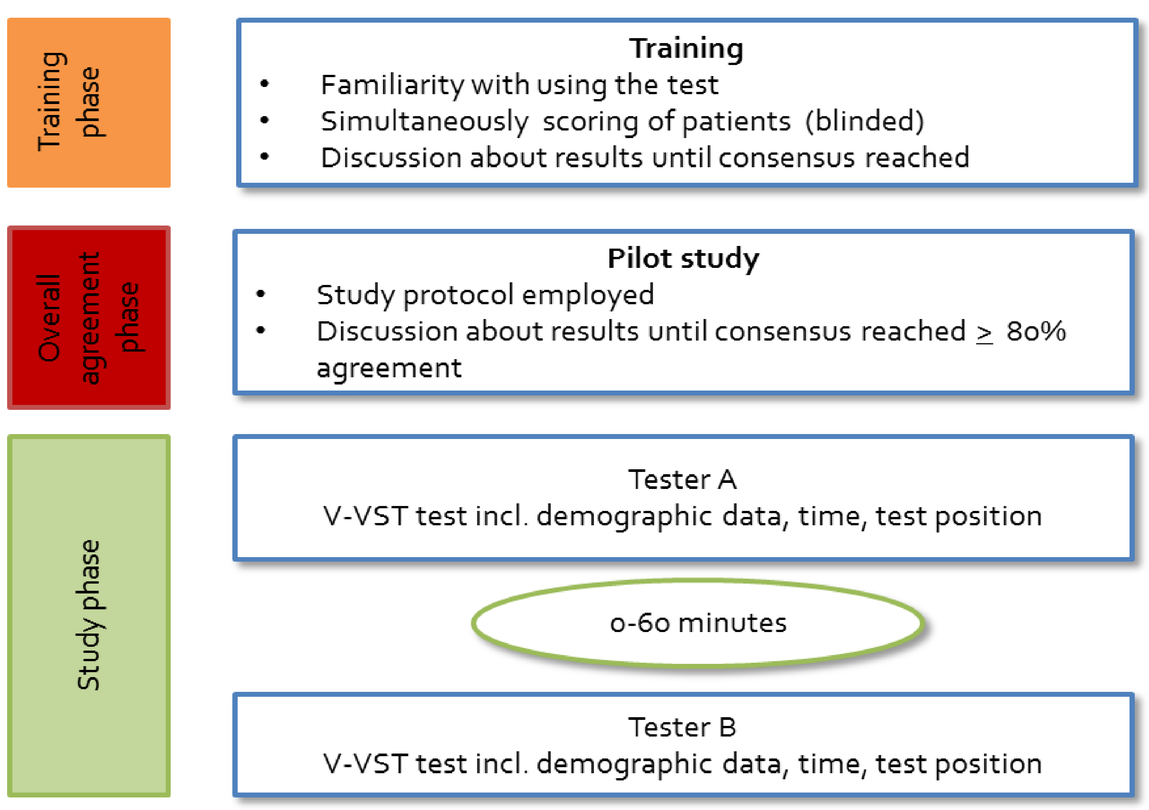
The Volume Viscosity Swallow Test (V-VST)[1] has high sensitivity for detecting Oropharyngeal Dysphagia (OD) but the reliability of the test is only investigated in a Spanish sample. Therefore the aim was to investigate the reliability of V-VST among geriatric and medical patients at Danish hospitals.

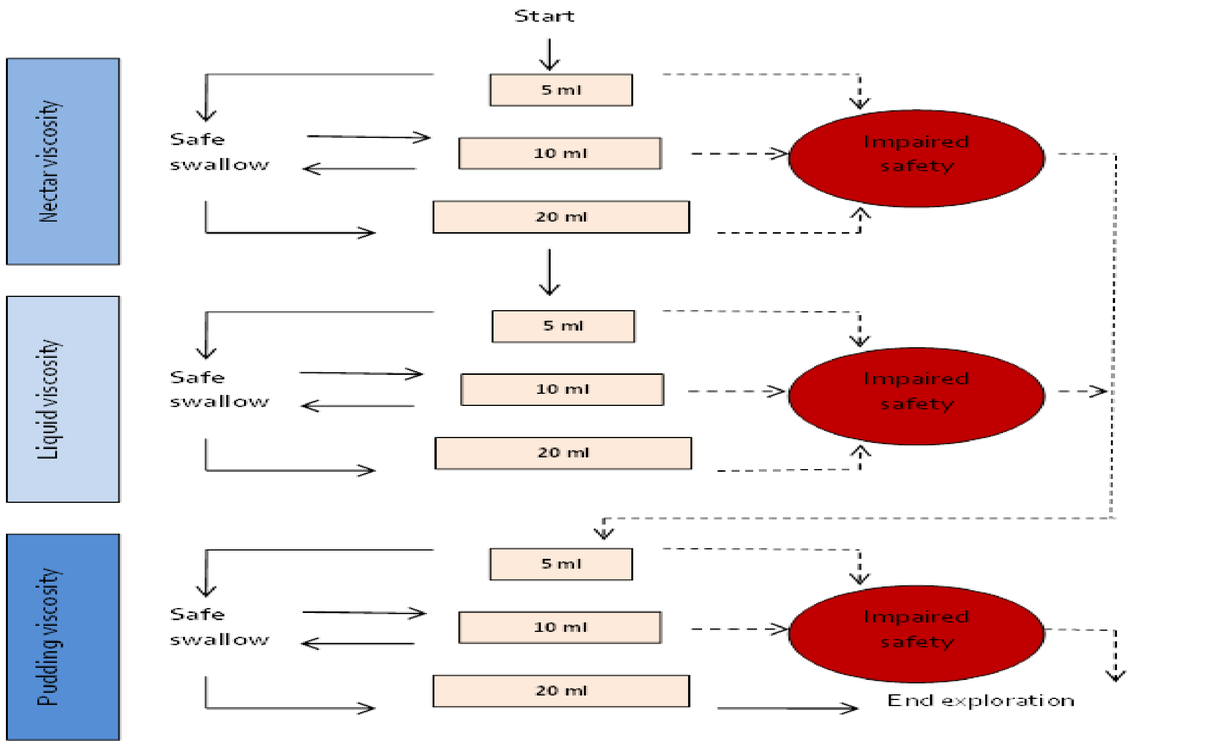
Conclusion

With a Kappa value of 0.75 the V-VST has been proven to be a reliable bed-side screening test for detecting OD in Danish patients at geriatric and medical wards.

Methods

Following the protocol of FIMM[2] the study was preceded by a training and an overall agreement phase and a study phase. In the training phase, the assessors completed the V-VST together. Any disagreement about the test approach and results were discussed until consensus was reached. In the overall agreement phase the assessors, following the criteria of the study phase, completed the V-VST independently an 80% overall agreement of the presence or absence of OD was required before proceeding. In the study phase, patients were consecutively admitted. The interrater reliability was completed within one hour.

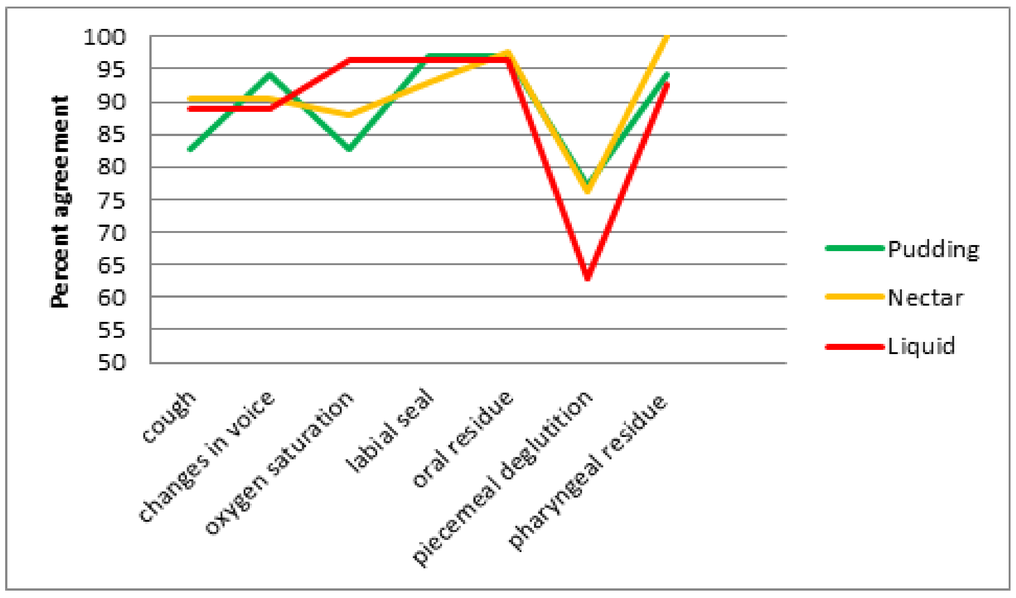




Impaired safety; changes in voice quality, cough, decrease in oxygen saturation ≥3% measured with a finger pulse-oximeter**.**
Impaired efficacy; impaired labial seal, oral residue, piecemeal, deglutition and symptoms of pharyngeal residue.
One or more signs of impaired safety and/or efficacy of swallow was considered presence of OD.

Results

One hundred and ten patients from medical and geriatric wards at three hospitals participated. The average age was 74 year and 57 % were women. The 5 most common causes of hospital admission were Infection/Fever (19 %), Poor general condition (18 %), Dehydration/Dizziness/Fall (15 %), Pneumonia (12 %), Pulmonary diseases (10 %) and the presence of OD were found by either of the testers in 47.3% of the participants. The overall agreement among testers were 87 %, with an 34,5 % agreement in presence of OD and an 52,7 % agreement in absence of OD. Regardless volume the percentage agreement for identifying signs of impaired safety or efficacy in all viscosities were high (88-97 %) except for piecemeal deglutition (58 - 75 %) which could be due to either prevalence or difficulties in assessing this sign when swallowing liquid.



	Diagnosis OD			Recommendation			
				Vicosity		Volume	
	Prevalence (%)*	Agreement	Kappa	Agreement	Weighted Kappa**	Agreement	Weighted Kappa
Total (n = 110)	52 (47,3%)	88,0%	0,75	91,1%	0,49	87,9%	0,53

*Tester A or B or both find the patient has OD
**50 % weight

1 Clave P et al. Accuracy of the volume-viscosity swallow test for clinical screening of oropharyngeal dysphagia and aspiration. Clin Nutr. 2008;27(6):806-15.

2Patijn J & Remvig L; Reproducibility and validity. FIMM Academy of manual/ musculoskeletal medicine. 2007

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