

patient, a student performed the test of swallowing one another and the same test associated with cervical auscultation. The alternation between students for the test is performed with or without auscultation eliminates the “test effect”. No information was communicated between students among themselves and with the doctor.

The results are presented in the form of ROC curves established according to the use or not of auscultation during the test food. Cervical auscultation does not change the area under the curve. The trend is even reversed with a decrease in performance with the severity of silent aspiration.

Thus, auscultation did not improve the performance of the test food in terms of predicting aspiration in the learning phase of swallowing tests by two students in speech therapy. The same study is now complete with experienced pathologists.

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### Efficiency of cough: Maximum phonation time: Bedside assessment

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**Introduction.**— This study aimed to assess cough effectiveness after a stroke and to propose a bedside screening test.

**Design.**— Patients who had had ischemic hemispheric stroke were recruited and followed-up for 2 mos. Maximum phonation time (MPT) was assessed during the first 10 days. Aspiration was evaluated on days 2 and 10 after stroke. Lung function testing was performed on day 10. Peak cough flow less than 160 L/min was defined as the criterion for cough ineffectiveness. Correlation between peak cough flow and MPT was determined, and the optimal cut-off value relating MPT to effective cough was determined using receiver operating characteristic analysis when referring to peak cough flow.

**Results.**— Of the 70 patients, six developed pneumonia (mean time,  $1.7 \pm 2.4$  days). Lung function assessment in 32 cases revealed general

reduced cough effectiveness. MPT was correlated with peak cough flow ( $r = 0.413$ ,  $P = 0.025$ ), and an MPT cut-off of 10 s was identified. Forty-seven patients were able to perform MPT on day 2; 49 were able to perform on day 10. Patients with MPT of 10 s or longer had less frequent aspiration on both day 2 (5.9% vs. 36.7%,  $P = 0.034$ ) and day 10 (2.9% vs. 26.6%,  $P = 0.026$ ).

**Conclusions.**— Cough effectiveness was reduced at the time of greatest risk for pneumonia. MPT provides a reliable bedside screening test of cough effectiveness.

**Further reading**

Zhou Z, Vincent F, Salle JY, Antonini MT, Aliamus V, Daviet JC. Acute stroke phase voluntary cough and correlation with maximum phonation time. *Am J Phys Med Rehabil* 2012;91(6):494–500.

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### Neuromuscular electrical stimulation (NMES) in head and neck cancer patients treated by radiation therapy with dysphagia

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Twelve patients were randomized for NMES and 13 for TT. Inclusion criteria were:

- patients treated by radiation therapy  $\pm$  surgery for an head and neck cancer;
- a delay more than 3 years after the end of treatment;
- no recurrence of the disease;
- ability to swallow.

Pre- and post-trial measurements were videoradiographic swallowing evaluation, nutritional status, oral motor function test, and a self-questionnaire (Deglutition Handicap Index [DHI]). All subjects received 15 therapy sessions. Statistically significant positive therapy effects for both NMES and TT combined were found only on the self-questionnaire (DHI). In two cases we observed a worsening on the videofluoroscopic probably despite this result. These results leads to precise the indication of the NMES technique apply to swallowing disorders.

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