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.

http://dx.doi.org/10.1016/j.rehab.2012.07.943

CO45-007-e

Efficiency of cough: Maximum phonation time: Bedside
assessment
J.-Y. Salle*, Z. Zhou†, E. Cugy‡, A. Judet*, J. Hamonet*, J. Bordes*,
J.-C. Daviét*
* EA 6310, service de médecine physique et de réadaptation, CHU de Limoges,
2, avenue Martin-Luther-King, 87042 Limoges cedex, France
† Service de médecine physique et de réadaptation, CHU Limoges, Limoges,
France
‡ Service de médecine physique et de réadaptation, CHU de Bordeaux, hôpital
Tastet-Girard, groupe hospitalier Pellegrin, 33076 Bordeaux, France
*Corresponding author.
E-mail address: jean-yves.salle@chu-limoges.fr.

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 ± 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, Daviét JC. Acute stroke
phase voluntary cough and correlation with maximum phonation time. Am J

http://dx.doi.org/10.1016/j.rehab.2012.07.944

CO45-008-e

Neuromuscular electrical stimulation (NMES) in head and
neck cancer patients treated by radiation therapy with
dysphagia
V. Woisard*, S. Grand, M. Puech
Unité de la voix et de la déglutition, service ORL, hôpital Larrey,
CHU de Toulouse, TSA 30030, 31059 Toulouse cedex 9, France
*Corresponding author.
E-mail address: woisard.v@chu-toulouse.fr.

Twelve patients were randomized for NMES and 13 for TT. Inclusion criteria
were:
– patients treated by radiation therapy ± 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 evalua-
tion, 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.

http://dx.doi.org/10.1016/j.rehab.2012.07.945