Diagnostic Accuracy Study of an Answer Reliability Assessment Tool for Aphasic Patients

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CONTEXT

Every year in France, approximately 130,000 people suffer a stroke. Neurovascular units (NVUs) provide rapid care for people with sudden onset neurological deficits of apparent vascular cause. Thirty percent of the victims suffer from phasic disorders during the acute phase. These language disorders have an impact on the care provided.
In the context of post-stroke aphasia, the most relevant means of verbal communication is closed questioning. However, the tools available to caregivers, doctors and paramedics to know if patients are capable of such a mode of communication, do not allow for a professional consensus. Furthermore, global aphasia assessment tools do not give any indication of the reliability of patients' answers to closed questions. We therefore developed a tool that would help to overcome this shortcoming. The Yes/No Questionnaire (YNQ) consists of 10 closed questions to assess the patient's ability to give a coherent answer and thus to distinguish between "reliable respondents" and "unreliable respondents".

OBJECTIVE

The objective of our study is to determine the threshold score of the Yes/No questionnaire.

METHODOLOGY

Prospective, single-center paramedical study to propose a score for diagnostic orientation in neurovascular units.

INCLUSION CRITERIA

- 18 years or older
- Right-handed
- Mother tongue: French
- Left stroke
- Hospitalized in a neurovascular unit or in neurology
- NIHSS < 25

EXCLUSION CRITERIA

- Deafness
- History of stroke
- Psychiatric history
- Dementia or pre-stroke cognitive impairment
- Protected adult (under guardianship or curatorship)
- Refusal of the relative of the patient's participation in the study

STATISTICAL ANALYSIS PLAN

The primary endpoint is the patients' YNQ score.
Patients will be classified as "reliable" and "unreliable" according to the speech-therapist assessment.

The distribution of patients in each group, reliable versus unreliable, will be described according to the YNQ scores. The ROC curve method will be applied to the scores. The informational value will be assessed by the area under the ROC curve. An optimal threshold to define positivity will be sought as a compromise between sensitivity and specificity with a focus on negative predictive value.
An internal evaluation of the performance of the score will be carried out on the database obtained, after resampling.

DURATION OF THE STUDY

- Duration of the inclusion period: 12 months
- Duration of follow-up per participant: maximum 7 days
- Total duration of the research: 12 months

EXPECTED BENEFITS

The score proposal study will be followed by an external validation study.
If the test is validated, it will improve the professional consensus around the patient and thus improve the patient's management and adherence to the therapeutic approach.