

P39 Sensitivity of the Aphasia Rapid Test for Russian (ART-Ru) for Detecting Changes in the Patient's Linguistic Status in Acute Stroke.

Authors: [Olga Buivolova](#)¹, Olga Dragoy¹, Oxana Vinter², Roelien Bastiaanse^{1,3}

Affiliations: ¹National Research University Higher School of Economics, Russia ²Moscow Municipal Clinical Hospital N31, Russia ³University of Groningen, The Netherlands

Correspondence information: obuivolova@hse.ru

Background and aims

Screening tests for speech and/or language disorders are meant to identify impairments at the acute stage (National Stroke Foundation, 2010). To identify aphasia in the acute stroke, a test has to be short and easy to be used by patients. Moreover, it is important not only to detect speech and/or language disorders but to evaluate the recovery dynamics. In previous research, the results of the adaptation of the Aphasia Rapid Test for Russian (ART, Azuar et al., 2013; Russian version, ART-Ru: Buivolova et al., 2018) were reported. The ART-Ru is a 26-point scale, allowing the medical staff to detect speech and/or language problems in acute post-stroke patients; however, it does not discriminate between aphasia and dysarthria. The test consists of 6 tasks (execution of two simple and one complex orders, repetition of three words with different phonological complexity, repetition of one sentence with the grammatical construction widespread in Russian, naming of three objects, scoring of dysarthria and semantic fluency task) and takes only 3 minutes to perform. The ART-Ru was shown to be a valid, sensitive and specific; inter-item consistency, test-retest and inter-rater reliability were high in the chronic population (Buivolova et al. 2018). That is why the ART-Ru is suitable for use at the acute post-stroke stage. This study was aimed to demonstrate that the ART-Ru is sensitive for detecting changes in the linguistic status in the first days post stroke onset.

Methods

The clinical group participating in the study were acute stroke patients (N= 16, 9 females, mean age = 71.4 (SD = 9.6); range 49-87, mean 7.6 (SD = 3.7) days post onset). Participants were tested twice during their stay in the hospital: at the enrollment to the hospital (T1 – mean 7.6, SD = 3.7, range = 3-14 days post onset), and before the discharge (T2 – mean 11.7, SD = 3.2, range 7-19 days post onset); the average amount of days between T1 and T2 was 4 days (SD = 1.7, range 2-6 days). All participants were examined by a speech-and-language therapist with the Vasserman's scale (Vasserman et al., 1997) between T1 and T2 and got her conclusion by T2 date.

Results and main contribution

The mean score of the ART at T1 was 9.6 (SD = .8) (range 2-25) and 7.0 (SD = 5.9) (range 1-23) at T2. The mean score improved significantly at T2 ($t(15) = 3.280, p = .005$). According to Azuar and colleagues (2013), significant improvement is improvement for more than 2 ART points. That is why Δ ART (T2 score – T1 score) was measured and it was significant in 50% of participants and not significant in other 50% of participants (0-1 points), no negative dynamics in the linguistic status was observed. Results on the Vasserman's scale (mean = 2, SD = .7, range 1-3) correlated with both T1 ($\rho = .560$) and T2 results ($\rho = .601$).

Conclusions

According to the results of the study, the ART-Ru is useful for measuring the early changes in linguistic status of the patient. The correlation between ART-Ru and Vasserman's scale from T1 to T2 also supports this statement.

Implications

ART-Ru is a valid and reliable screening tool which can be used at the acute post-stroke stage for detecting speech and/or language disorders, evaluating the severity of disorders and measuring the recovery dynamics. In future studies, it would be interesting to investigate whether the ART results obtained at the acute stage can predict the degree of recovery at the chronic post-stroke stage.

References

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