Apraxia Screen of TULIA (AST)

INSELSPITAL
UNIVERSITÄTSSPITAL BERN
HOPITAL UNIVERSITAIRE DE BERNE

Name patient: **Test date:**
Name examiner:
Diagnosis (incl. lesion localization):

Imitation

General instruction: "Seven gestures are demonstrated in a mirror fashion, imitate them as precisely as possible"

	right	left
1. Bring thumb extended on forehead, other fingers point upwards		
2. Wipe dust from shoulder		

Additional instruction: "For the next five gestures, imagine holding a tool or an object in hand, don't use your fingers as a tool"

3. Drink from a glass		
4. Smoke a cigarette		
5. Use a hammer		
6. Use scissors		
7. Use a stamp to postmark		

Pantomime

General instruction: "Now gestures are asked. Listen very carefully and perform them as precisely as possible"

8. "Show as if someone is crazy" *		
9 . "Make a threatening sign" **		

Additional instruction: "Again, imagine holding a tool or an object in hand, don't use the fingers"

10. "Brush your teeth"		
11. "Comb your hair"		
12. "Use a screwdriver"		
Total Score		

Item 1 = meaningless; Items 2,8,9 = intransitive; Items 3-7 and 10-12 = transitive
* repetitive tapping of the index finger at the temple (rotating movements of index finger are also correct).
** upraised clenched fist (upraised index finger or open hand are also correct).

Apraxia Screen of TULIA (AST)

A. Test description

The screening test (Vanbellingen et al., JNNP 2010) comprises 12 items extracted from the more comprehensive test of upper limb apraxia, TULIA (Vanbellingen et al., EJoN 2010) by item reduction analysis. The items represent all semantic categories: one meaningless, three intransitive (communicative) and 8 transitive (tool-related) gestures. In addition, 7 gestures each are tested in the imitation and 5 in the pantomime domain. The 6-point scoring method of TULIA was dichotomized to "fail = 0 and pass = 1". The cut-off levels of AST were determined in the original sample (n=133) by comparing the corresponding 12 items from TULIA recoded to pass and fail with the full version. Accordingly, using cut-off levels of 9 and 5, high specificity (93%) and sensitivity (88%) for mild and severe apraxia could be estimated.

B. Test situation

The patient is seated in front of the examiner; both with the forearms placed on the table. Hemiparetic patients execute the gestures with their non-paretic upper limb i.e. ipsilesional. Otherwise both upper limbs are tested. The test performance of the patient is evaluated „online" during the examination and reported on the scoring sheet (page 1).

C. Test evaluation

Dichotomous scale: **0** = fail, **1** = pass
Maximum score = **12**
Total cut-off score **< 9** *
Severe Apraxia **< 5**

Score **0** =
- Appearance of body part as object errors
- Considerable spatial errors, extra movements and omissions, false end position , substitutions and perseverations
- Amorphous or seeking movements, not related to the desired gesture

Score **1** =
- Normal movement
- Slight slowdown or discrete spatial errors (e.g. diminished amplitude) are allowed
- Discrete extra movements or omissions can occur
- Also when brief substitutions or perseverations occur, which are corrected, the score is still given

---

*Alternive cut-off score < 5 for imitation part only, in case of severe language comprehension problems (can be presumed, if three or more amorphous movements occur for pantomime).