Also of relevance for the study of the respective roles of each of the cerebral hemisphere are the not so rare cases of crossed aphasia (more frequent though among children!). The hypothesis of the « progressive transfer » (in the learning period) from the right hemisphere to the left of some components of the language faculty (together with other functions such as music...) will be put forward during the presentation, following the initial writings from Goldberg & Costa at the beginning of the eighties. Thus, the functional specificity of both hemispheres would not be considered as « hardwired » from the crib (and even before) for language, music... but would rather be the consequence of the processing (and evolving) mode applied to such cognitive abilities as language, music, face recognition. ...

If correct, according to such a view, it would not be language or music that would be localized in the left or the right hemisphere but certain types of cognitive processes, as also shown by case studies of « split brain » patients as well as several studies on nonhuman primates.

CO21-002-e

Subtle language in patients with stroke

M. Rousseaux a,*, P. Dei Cas a, S. Gossery b, C. Jaman b

a CHRU de Lille, hôpital Swynghedouw, rue Verhaeghe, 59035 Lille, France
b Institut d’orthophonie, Lille, France
*Corresponding author.
E-mail address: marc.rousseaux@chru-lille.fr

Keywords: Language; Pragmatics; Semantics; Subtle language; Stroke

Objective.— Subtle language is the expression of knowledge and know-how about language. It is composed of elements of metalanguage and pragmatics. Left stroke classically results in lexical and syntactic disorders, right stroke in difficulties in discourse and use of metaphors, and frontal stroke in a reduction of verbal fluency and speech incoherence. But subtle language has not been studied as such. Here, we analyzed it in patients with focused hemispheric stroke.

Patients and methods.— We included 44 patients, 21 had left lesions in the territory of the middle cerebral artery (MCA) with mild to moderate aphasia, 14 similar right lesions, and 9 lesions of the territory of the anterior CA (ACA). The analysis included 15 tasks, each with three difficulty levels: definition (1), evocation from definition (2), sentences concatenation (3), synonyms (4), procedural discourse (5), verbal logic (6), polysemie (7), intruders (8), absurd (9), differences (10), proverbs (11), declarative speech (12), antonyms (13), imageable expressions (14) and argumentative discourse (15). Performance was compared to that of 71 matching control subjects (age, education level, gender) in an ANOVA of factors Group, Task and Difficulty (P < 0.05).

Results.— The Group effect was significant and interacted with the Task. Left strokes were more penalized in tasks 1, 4, 6, 8, 10, 11, 12 and 13, right ones in tasks 6, 8, 10 and 12, and frontal ones in tasks 3, 6, 8 and 12. Moreover, more difficult items were more affected in patients. Differences correlated with language (Montreal Toulouse test), memory (Battery 144) and executive (Trail Making Test) disorders.

Discussion.— The more severe disorders after left-sided lesions a priori resulted from lexical-semantic and syntactic difficulties. Right lesions especially impaired tasks addressing similarities-differences between words and concepts. Frontal lesions mainly impaired the interpretation of proverbs and verbal logic. Discourse involvement did not discriminate groups. Each type of disorder reflected the role of corresponding structures in specific cognitive processes.

CO21-003-e

Presentation of the cognitive assessment scale for stroke patient (CASP)

J.-L. Barnay a,*, W. Gregoire b, R. Marc c, B.K. Huei-Yune d, F. Dischler d, X. De Boissezon e, B. Lucas-Pineau f, C. Bénaim g

a CRF Divio, rue Saint-Vincent-de-Paul, 21000 Dijon, France
b CCR, CHU de Dijon, Dijon, France
c Rééducation neurologique, CHRU de Lille, Lille, France
d Département MPR, CHU de Nîmes, Nîmes, France
e Département MPR, CHU de Toulouse, Toulouse, France
*Corresponding author.
E-mail address: jlb972@hotmail.com

Keywords: Brief cognitive assessment; Stroke; Aphasia

After a stroke, the presence of aphasia significantly disturbs the assessment of other cognitive functions. The rapid screening battery of cognitive impairment tests (MMSE, MOCA, R-CAMCOG, RBANS) are not suitable for aphasics because they contain verbal items. Therefore, the assessment of higher functions in aphasic patients (excluding language) can only be achieved by trained examiners. Similarly, aphasics are routinely excluded from stroke treatment protocols, whether the trials concern the evolution of cognitive function or not. Yet it is possible to assess, at least roughly, all cognitive functions without using language.

We present the Cognitive Assessment for Stroke Patients (CASP). This is a battery of rapid test to assess cognitive functions. They were developed for the detection and quantification of cognitive impairment after stroke and can be used in most patients, including those who lack oral expression and/or have moderate understanding abilities.

Apart from items that analyze language, the CASP was developed from previously validated non-verbal tests and clinical maneuvers recommended by the French College of Neurology Teachers. Six cognitive functions are evaluated: language, praxis, short-term memory, time orientation, spatial neglect/visual-construction and executive functions.

The form of these tests was adjusted so that taking the test would not be hindered by impaired expression, or by unilateral spatial neglect. Its validity in terms of appearance and content were checked in 2011. Our experience suggests that the CASP can be completed in less than 10 minutes in most patients with motor aphasia and that the use of pictures suitable for aphasic patients was not a problem for patients with spatial neglect. However, the presence of severe disorders of understanding is still insurmountable.

Full validation of the CASP is the subject of a multicenter research protocol. At the conference, we will present the results of the first validation phase, which began in February 2012. Its objective is to compare the CASP to the MMS and MoCA in terms of feasibility and time spent to complete the test.

CO21-004-e

Communication disorders in brain damaged post-stroke patients in Benin

G.T. Kpadonou a,*, E. Alagnidé a, E. Fioissi-Kpadonou b, D. Niama c, N. Adjaka d

a Service de rééducation et de réadaptation fonctionnelle du CNHU, 04 BP 808, Cadjehoun, Cotonou, Benin
b Service de psychiatre, Cotonou, Benin
*Corresponding author.
E-mail address: kpadonou_toussaint@yahoo.fr

Keywords: Stroke; Communication disorders; Speech therapy; Benin

In western countries, progress has lessened the effects of many communication disorders (CD) [1]. Few data are available from Africa on this issue, particularly from Benin.

Objective.— To assess the impact of CD after stroke in Benin.

Method.— Retrospective descriptive and analytical study based on 563 stroke patients followed in the rehabilitation department of the teaching hospital in Cotonou, January 2006 to December 2010.

Results.— The prevalence of CD was 42.10%. The average age was 57.17 ± 12.62 years. A male predominance was noted (P = 2.10^−5) with a sex ratio of 1.76. 74.68% were right-handed. For 62.45%, the stroke was ischemic. The left cerebral hemisphere was affected in 68.78%. CD affected oral expression (95.78%), written expression (2.11%), understanding (13.08%)