

Vascular Crossed Aphasia in Dextrals: A Study on Bengali-Speaking Population in Eastern India

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Abstract : Crossed aphasia has been an area of considerable interest for cognitive researchers as it offers a fascinating insight into cerebral lateralization for language function. We conducted an observational study in the stroke unit of a tertiary care neurology teaching hospital in eastern India on subjects with crossed aphasia over a period of four years. During the study period, we detected twelve cases of crossed aphasia in strongly right-handed patients, caused by ischemic stroke. The age, gender, vernacular language and educational status of the patients were noted. Aphasia type and severity were assessed using Bengali version of Western Aphasia Battery (validated). Computed tomography, magnetic resonance imaging and angiography were used to evaluate the location and extent of the ischemic lesion in brain. Our series of 12 cases of crossed aphasia included 7 male and 5 female with mean age being 58.6 years. Eight patients were found to have Broca's aphasia, 3 had trans-cortical motor aphasia and 1 patient suffered from global aphasia. Nine patients were having very severe aphasia and 3 suffered from mild aphasia. Mirror-image type of crossed aphasia was found in 3 patients, whereas 9 had anomalous variety. In our study crossed aphasia was found to be more frequent in males. Anomalous pattern was more common than mirror-image. Majority of the patients had motor-type aphasia and no patient was found to have pure comprehension deficit. We hypothesize that in Bengali-speaking right-handed population, lexical-semantic system of the language network remains loyal to the left hemisphere even if the phonological output system is anomalously located in the right hemisphere.

Keywords : aphasia, crossed, lateralization, language function, vascular

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