

# 'Expressed' dysphasia

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## Abstract

An ironic poem written at the time of a transient ischaemic attack is illustrated which demonstrates the expressive nature of dysphasic dysgraphia at the moment of the attack (Fig. 1).

## Keywords

TIA; transient ischaemic attack; dysgraphia; dysphasia.

## Case history

A 68-year-old right-handed gentleman was referred to a vascular clinic with a history of a transient ischaemic attack presenting as expressive dysphasia. The patient confirmed that he had experienced a temporary inability to formulate his words, describing his first symptom as an inability to write words correctly. As a keen poet he regularly engaged in writing compositions and the illustration neatly demonstrates the expressive nature of his dysphasia at that time. He explained that his recognition of the words was faultless. At line 4 he was unable to spell, but recognised his inaccurate attempts as mistakes. Repeated attempts to correct this were fruitless (line 5 should read 'So that nothing new or original is possible'). Furthermore, he tried to express his concern to his wife verbally but similarly was unable to formulate speech. His symptoms continued in the absence of either motor deficit or amaurosis fugax for an hour. Examination found him normotensive in sinus rhythm with no detectable thrills or bruits. Carotid imaging was arranged to reveal an insignificant carotid stenosis and he was discharged on low dose aspirin without further investigation.

## Dysphasia

The interference of the higher function of language is termed dysphasia or aphasia and is caused by lesions in the dominant hemisphere. Language can be subdivided into the functions of reading and comprehension of speech (i.e. writing and speaking) and a motor dysfunction of speech, termed dysarthria. Focal lesions in the brain may cause specific dysfunction in language. In classical neurology difficulty in comprehension of speech is classified as receptive dysphasia (Wernicke's area in the posterior third of the superior temporal gyrus), difficulty in formulation of language as expressive dysphasia, either as speech (Broca's area in the inferior frontal gyrus), or writing (angular gyrus) which is termed dysgraphia. A lesion in the arcuate fasciculus may produce a conduction dysphasia which disrupts the conduction pathways between Wernicke's and

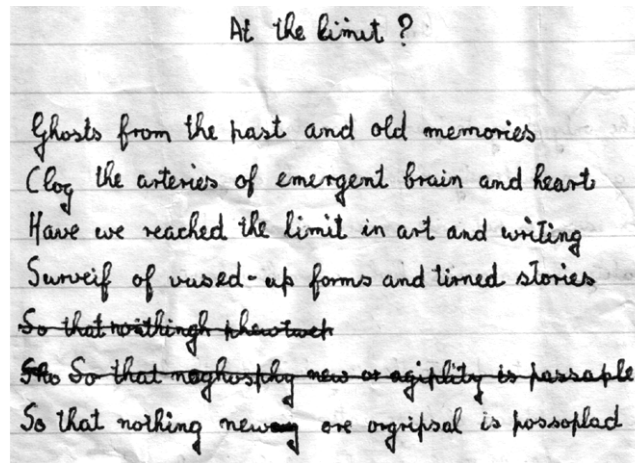


Fig. 1.

Broca's areas. Commonly a dysphasic patient presents with elements of all of these various 'pure', if theoretical, syndromes. Lichtheim suggested an approach that emphasized disruption of the connexions between these various 'centres'. Whereas dysphasia affects language comprehension, dyspraxia describes a dysfunction in complex motor actions but with intact comprehension, coordination and motor power. Dyspraxia may include abnormalities in writing or dressing. Agnosia, a disorder of higher-level perception, implies disruption of visuo-perceptual pathways in the non-dominant hemisphere.

This patient was aware of his written language disorder implying that although he had an expressive disorder in execution of writing (dysphasic dysgraphia), he was able to read the text later and recognise his errors, and thus was receptively intact. He suffered therefore only an inability to perform the action of writing (apractic dysgraphia). In many forms of dysphasia, therefore, in particular those dysphasias in which there is a disconnexion between one 'centre' and another, as postulated by Lichtheim, the lexicon and the grammatical structure is intact, but not accessible for language use in one or more functional domains. The interested reader will find the work of Chomsky and Jacobsen on the acquisition of language interesting in this context, specifying the separate functions of lexicon, an acquired database of words and rules, and the inbuilt cortical structure of language that subserves all human languages, indicating the universality of the language substrate for all human languages.

The irony of lines 1-2 in the passage warrants no further discussion within the bounds of any medical text!

### Further reading

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