

Wernicke's aphasia and attempted suicide

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Poststroke depression (PSD) is the most frequent mood disorder in early and late phases after stroke onset. Recent studies indicate that 30–40 % of stroke patients suffer from this disorder [1] and prevalence is supposed to be even higher in patients with aphasia [2]. Suicidal ideation might occur in 15 % of stroke patients, doubling the prevalence in the normal population [3]. PSD is one of the most important risk factors for suicide in stroke patients [4]. Thus, early diagnosis and treatment are crucial. However, the assessment of PSD and suicide ideation in patients with severe aphasia poses serious challenges.

We report the case of a 66-year-old right-handed man with persisting Wernicke's aphasia (WA), 16 years after a left perisylvian stroke due to atrial fibrillation. The patient was not known for prestroke mood disorders.

Residual deficits were severe WA, right homonymous hemianopia, right faciobrachial paresis and hypoesthesia. Spontaneous language was fluent, but uncommunicative due to continuous phonological and verbal paraphasias (jargonaphasia). Comprehension of auditory, written and

visually presented material, naming, repetition, reading and writing were severely reduced. Finally, the patient was unable to process any kind of communication, even by gesticulation or pantomime.

In spite of aphasia, the patient's autonomy was preserved for daily living activities. He was able to walk with a cane and to participate together with his wife in few scheduled activities and social events. Aphasia therapy was withdrawn several years before because of the recurrence of irritability and anger in coping with linguistic tasks.

Few days before Christmas, 16 years after stroke, the patient shot himself in the head with a pellet gun, which he had moved secretly from the storage basement into his bureau. Brain CT-scan showed the lead bullets, which pierced the temples throughout the orbits, sectioning the optic nerves outside the cranial cavity (Fig. 1). The patient became blind, but the brain remained grossly uninjured. No surgery was performed. Citalopram was introduced and the dose increased progressively to 60 mg/day. The patient spent 2 months in a psychiatric hospital, 1 month in a rehabilitation hospital and 2 months in a nursing home before being discharged home.

After the suicidal attempt, there were no possibilities of assessing mood with standardized questionnaires or scales.

To our knowledge, this is the first report of a premeditated suicide attempt of a patient with WA. The peculiar clinical feature of this case is that the attempted suicide occurred 16 years after the stroke without warnings.

Aphasia is a frequent consequence of stroke (about 30 % of patients in the acute phase) [5]. Although improvement of linguistic faculties generally occurs with variable degree over the first year, about 50 % of patients are left with long-term residual deficits [5]. Stroke patients experience high frustration when verbal communication is impaired.

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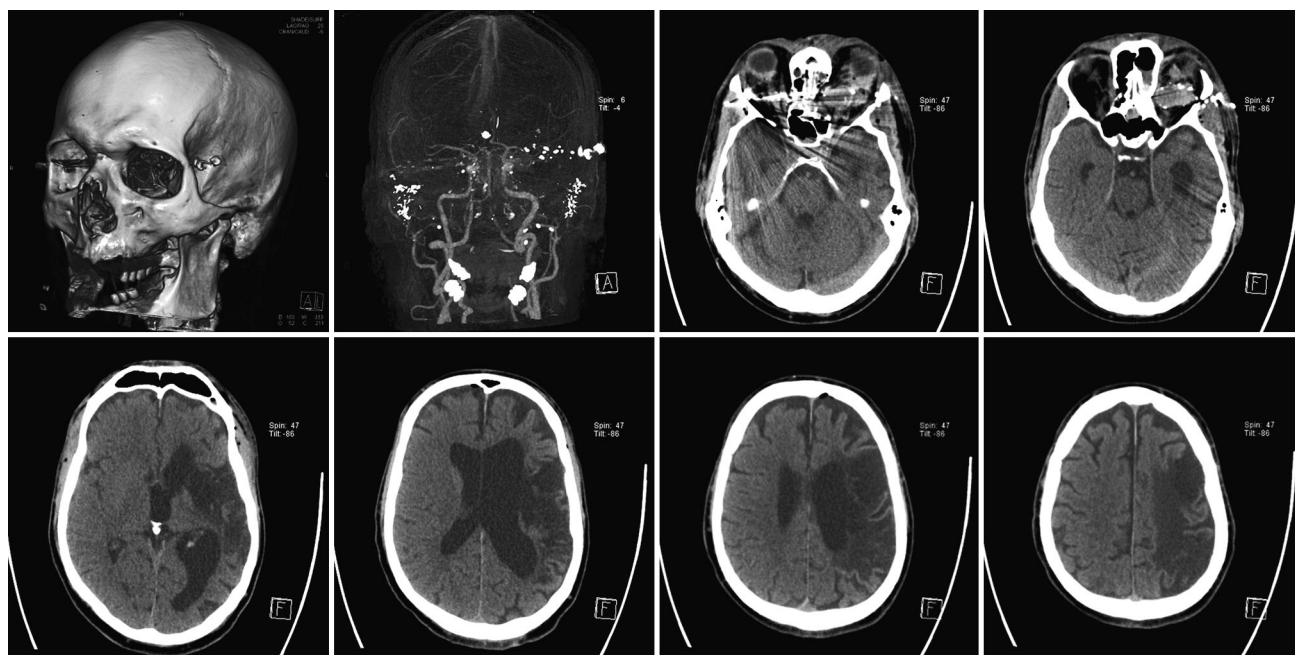


Fig. 1 Brain CT-scan sections showing bullet remnants in the orbits along the optic nerves with evidence of orbital hematoma on the *left*. Note the holes on the *left* (entrance) and *right* (outlet) temples,

delineating the bullet trajectory. Note the ancient malacic ischemic lesion located within the *left* MCA territory and including the perisylvian language areas

WA is a severe form of fluent aphasia as verbal expression (consistent with fluent paraphasic speech) and comprehension are severely affected. Lesions are located in or near Wernicke's area. Except some context-based management, there are only limited treatment approaches and the prognosis for rehabilitation, compared to non-fluent aphasia is poor.

Although residual non-linguistic thought processes are probably spared, individuals with WA show limited awareness of linguistic difficulties and reduced monitoring of verbal outputs. It is extremely difficult to access from outside the patient's inner world and to perform systematic studies of their affective experiences. Standardized questionnaire screening or assessing poststroke depression (PSD) or other affective disorders (such as mania and psychosis) and visual mood scales cannot be employed in patients with WA or other severe aphasia [6]. Neuropsychiatric diagnosis for WA would rely only on behavioral observations.

The peculiar behavioral profile of patients with WA, probably due to the damage of associative temporal areas, includes paranoid agitation, frustration, anger, aggressiveness, psychosis, euphoric indifference, anxiety and restlessness.

For the patient we reported, it is not possible to conclude whether depression, anger, episodic dyscontrol or the feeling of loneliness and being detached from others drove the suicide attempt.

In conclusion, we propose that the potential for depression, anxiety, alienation, behavioral dyscontrol and

finally suicide should be seriously considered for every patient with severe WA, assessed by all health-care providers and explained carefully to the family.

Neurologists, neuropsychiatrists, neuropsychologists and speech-language therapists have an important role in identifying affective symptoms, making differential diagnosis and planning behavioral or pharmacological interventions.

The access to harmful situations or to weapons should be carefully prevented for all the patients with WA, especially when they overtly display anger or frustration.

Compliance with ethical standards

Conflict of interest I declare that the authors do not have conflict of interest.

Ethical standard The authors declare that they act in accordance with ethical standard laid down in the 1964 Declaration of Helsinki.

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