CASE REPORT

Dystextia as a presentation of stroke

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Accepted 2 November 2014

SUMMARY

Cerebrovascular accident remains one of the major causes of morbidity and mortality worldwide. Understanding the presentation of this common disease will be of great benefit for early diagnosis and management. We report a newly recognised symptom of stroke where there is difficulty writing mobile phone texts, an entity called dystextia. This symptom was previously reported as a presentation of complex migraine and starts to be recognised in the symptomology of stroke. Our patient with this presentation was found to have ischaemic stroke secondary to carotid vascular disease which was operated and she had a complete resolution of her symptoms with returning to her baseline shortly after hospitalisation and before her vascular intervention.

BACKGROUND

Cerebrovascular accident can present in a wide scale of symptoms and can be asymptomatic. Motor weakness, sensory and visual changes may be present and is well prescribed in the literature.^{1–3} Aphasia is a well-known presentation which can be of different subtypes. This entity represents a language problem which is a complex function of specific areas in the brain. With electronic communication devices being part of our daily life way of expression, neurological disease can be identified as a deviation of normal communication capabilities. One of heavily used ways of communication is texting which can be affected when disturbance in brain function happened.⁴

CASE PRESENTATION

A 61-year-old Caucasian right-handed female patient presented to the emergency room with transient right hand clumsiness which happened 16 h prior to presentation and lasted for less than 1 h. While trying to text her friend, she was not able to find words and felt as if she is confused. After that she tried to text her son, who lives in a different state, and he received a weird text message; he called emergency medical services (EMS) for her and she was brought to the hospital. Of note patient had one episode of transient right hand clumsiness 2 years ago which lasted for less than 5 min and resolved by itself. No headache, alteration in sensation, left upper extremity and bilateral lower extremity weakness, nausea or vomiting, visual disturbance were noted. Review of systems is otherwise negative. Her medical history include: chronic obstructive pulmonary disease not on treatment, tobacco misuse, hiatal hernia and urge incontinence.

Her surgical history includes total hysterectomy and exploratory laparoscopy after trauma. She is living alone and able to take care of herself without any limitation; she is an everyday smoker of a pack per day for the past 30 years, drinks alcohol occasionally and denied the use of recreational drugs. Family history was positive for myocardial infarction in her father and one brother.

In the emergency room her vital signs showed blood pressure of 129/80 mm Hg, pulse rate of 107 bpm, temperature of 36.8°C, respiratory rate of 13, and her body mass index was 28.29 kg/m².

On neurological examination, she was oriented to three, was not able to read what was written on the TV screen, power examination was normal in both upper and lower extremities, no sensation loss, normal cranial nerve examination, normal reflexes and negative Babinski sign. Carotid examination revealed carotid bruit bilaterally. Rest of physical examination was within normal limits.

Head CT scan without contrast was performed and was normal (figure 1), ECG showed sinus tachycardia with no other changes, and her initial laboratory investigations including complete blood count, comprehensive metabolic panel and urine drug screen were negative. Patient was admitted to the hospital for further management. By that time her son who lives in a nearby state came to the hospital and provided us with the weird message on which he called EMS:

(First message: "Oh honey your"

Second message: "I am weak."

Third message: "I am out, don't know how sleep, can't sense, I can't type, lov you."

No response in between messages, texting time was midnight).

Figure 1 Normal CT of the head without contrast.

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To cite: Al Hadidi S, Towfiq B, Bachuwa G. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-206987

Figure 2 Left middle cerebral artery infarct.

In the hospital, she was started on aspirin, lisinopril and high-intensity statin in the form of atorvastatin 80 mg. Telemetry showed no abnormal heart rhythm; bilateral carotid duplex showed bilateral arteriosclerotic changes of the carotid bulbs and internal carotid artery (ICA). There was severe narrowing at the origin of the right external carotid artery, and there is severe narrowing of the proximal 2 cm of the left ICA approaching 80–90%. Brain MRI with and without contrast showed acute to subacute left middle cerebral artery (MCA) infarct with haemorrhagic transformation in the left temporal region (figures 2 and 3). Transthoracic echocardiogram was performed and was normal.

Figure 3 T2 bright signal intensity with restricted diffusion seen involving the peripheral regions of the left frontal, left parietal and left temporal lobes.

Patient was diagnosed with acute left hemispheric superior MCA ischaemic stroke with severe left ICA stenosis.

TREATMENT

Vascular surgery was consulted and patient was scheduled for CT angiography of the head and neck and for left carotid endarterectomy and was discharged home after she had a total resolution of her symptoms.

OUTCOME AND FOLLOW-UP

Patient underwent left carotid endarterectomy with bovine patch angioplasty and was seen as follow-up in the outpatient clinic after 2 weeks of the procedure. No problems with testing were reported and the patient continued to receive aspirin, lisinopril and atorvastatin.

DISCUSSION

Sending a text message involves numerous brain functions including vision and language as well as gross and fine motor skills, and therefore the ability to text is likely to be impaired in patients presenting with stroke. This case is peculiar in that the weird text message was the reason why the son asked for medical help. With the growing use of mobile telephones, difficulty in sending text messages may be increasingly recognised as a presenting symptom of neurological disease.^{1–3} Ways of communication keep on changing with advances in technology and the more we progress with technology, which is a result of extensive thinking and brain function, the more we will see new symptomatology in the field of neurology.

Learning points

- Dystextia, difficulty writing mobile phone texts, is a newly recognised symptom of stroke.
- Electronic communication is advancing; therefore, it became an important identifier of neurological disease.
- Dystextia resembles important symptom of stroke, especially in people relying more heavily on written rather than spoken communication.
- The art of history taking without underestimating patients' symptom description will remain the best way to reach accurate diagnosis.

Contributors SAH is the primary author who took care of the case and wrote it down. BT and GB reviewed and edited the manuscript and reviewed related literature.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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