Case Report

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An Unusual Presentation of CVA As Epilepsy Partialis Continuum

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Abstract

Post seizure epilepsy imposes a clinical dilemma in terms of diagnosis and management. Standard mortality rate for epilepsy related to CVA is higher than for all other causes. Effect of post stroke seizures on stroke outcome remains unclear. We present a case report of unusual presentation of CVA as "epilepsy partialis continuum".

More research about specific health related quality of life and measures relevant to post stroke epilepsy is needed for better understanding and optimal management of this clinical condition.

Keywords: Stroke; Arterial Ischemic Stroke; Epilepsy; Hemorrhagic Stroke; Antithrombotic Therapies.

Introduction

Post-stroke seizure and post-stroke epilepsy are common causes of hospital admissions, either as a presenting feature or as a complication after a stroke. They require appropriate management and support in long term. With an increasingly ageing population, and age itself being an independent risk factor for stroke, the incidence and prevalence of post-stroke seizure and post stroke epilepsy is likely to increase. Stroke is the most common cause of seizures in the elderly population. The Oxford shire community stroke project (OCSP), which examined the immediate and long term risk of seizures after stroke, reported that 11.5% of patients with stroke were at risk of developing post-stroke (that is, delayed) seizures by five years. Post stroke seizure is defined as "single or multiple convulsive episode/s (fit/s) after stroke and thought to be related to reversible or irreversible cerebral damage due to stroke regardless of time of onset. Early seizures after a stroke will be referred to as post stroke seizures rather than post stroke epilepsy.

Diagnosis of epilepsy has considerable social and psychological impact on the patients and it should not be made lightly. There is also a mild degree of depression and anxiety, although statistically insignificant, in such cases. Post stroke epilepsy imposes a clinical dilemma in terms of diagnosis and management. Moreover, standard mortality rate, for epilepsy related to cerebrovascular disease, was higher than for all other causes (4.3% and 3.0%). Therefore, a secure diagnosis of epilepsy, treatment tailored to the patient, and continuing integrated care and support are essential.

Case History

60 yr old female patient presented to the ED with complaining of Abnormal movement of the Left Upper limb and mostly the left hand since last 6 hrs. The movement started gradually and was only localized to the left upper limb. The symptoms have remained constant and there was no worsening of the symptoms. She had no history of any headache, fever, loss of consciousness, fall, palpitation. There is no associated weakness in the lower limb and no slurring of speech. There is no history of any seizure disorder in the past. The abnormal movement was continuous in nature and was more obvious on lifting the left upper limb, but was also persisting at rest. There is no preceding history of any nausea, visual disturbance, tingling or numbness. She was at her home and was

taking rest after her lunch when she noticed the movement in her left upper limb. No history of any trauma, fall, seizure in the past. The patient is not on any regular medication and has no h/o any hypertension, vision problems or sinusitis or upper respiratory tract infection. There was no travel history and no h/o any recent vaccination.

On Examination the Vitals were

Pulse – 88 /m

BP- 140/90 mmhg.

RR-18/m

Spo2-100% in RA.

RBS- 103 mg/dl.

Temp- Afebrile.

Cardiac monitor – Normal Sinus rhythm

HEENT- WNL and no JVD and no Carotid bruit.

PUPIL- b/l PERLA.

Chest- b/l VBS and no added sound

CVS- S1 and S2 audible and no murmur heard.

P/A- Soft and no guarding and no rigidity, no tenderness and normal bowel sounds and Bowel Sounds present. No pulsatile mass and no bruit or thrill felt in the abdomen.

CNS- Conscious and oriented, GCS 15/15.

Memory: Short & Long term memory- wnl

Orientation: To time, place and person – wnl

Speech : Normal.

Cranial nerve : I to XII intact.

Sensation: Superficial sensation intact. Joint sense intact.

Motor: Rt UL & LL wnl and no deficit

Lt. UL Focal Seizure like movement.

Lt. LL wnl and no neurodeficit.

Power: Right upper & Lower limb 5/5.

Left Upper Limb 3/5.

Left Lower Limb 5/5.

Plantar: B/L Flexor

Sensation- Intact(B/L UL&LL).

Extremity and exposure:- WNL and no pedal edema and no rashes.

Past History - No major illness in the past.

AMPLE history:- No allergy, Not on any medications, No past medical or surgical history, Ate her breakfast, Sudden onset of Abnormal movement in the Left Upper limb.

Impression

Left sided monoparesis with partial epilepsy.

The patient continued to have abnormal movement of the Left Upper Limb and was seen in the ED by the neurologist and started on Inj. Lorazepam 4mg iv stat & Inj. Leveteracitam 1000 mg iv stat and a MRI Brain was ordered.

Laboratory Investigations:

TLC	6.5
RBC	4.1
Hemoglobin	8.7
Packed Cell Volume	29
MCV	70.6
Platelet Count	327
Neutrophils	55%
Lymphocytes	40%
Monocytes	3%
Eosinophils	2%
Serum Creatinine	0.56
Sodium	135.2 L
Potassium	4.2
Chloride	103.1
Total Protein	7.5g
Albumin	4g/dL
Bilirubin,Total	0.7mg/dL
Bilirubin,Direct	0.1mg/ dL
SGOT (AST)	18LIU/L
SGPT (ALT)	20 IU/L
A.G. RATIO	1.1 L
Globulin	3.5g/dL
BICARBONATE	24mmol/L
CHOLESTEROL SERUM	167mg/dL
TRIGLYCERIDE	136mg/dL
CHOLESTEROL HDL	47.5mg/dL
LDL CHOLESTEROL	118mg/dL
VLDL CHOLESTEROL	27.2mg/dL
TSH	2.79uIL/mL

TROP I	0.01ng/mL
HbA1c	5.1%
PROTHROMBIN	14.7
Partial Thromboplastin Time	20
INR	1.15
APTT CONTROL PLASMA	28

MRI Brain

Rt.sided mca territory multiple cortical acute infarcts.

Patient continued to have left upper limb focal seizure and was diagnosed as Epilepsy Partialis Continuum and admitted under neurology and started on the following medications.

Tab. Aspirin 325mg stat orally.

Tab. Atorvastatin 40 mg stat orally.

Inj. Levitiracetam 500mg BID.

Conclusion

The effect of post stroke seizures on stroke outcome remains unclear. While some studies showed better outcome, some reported a worse outcome. In one series, seizures were associated with better outcome in terms of the Scandinavian stroke scales (SSS). In their study, the authors examined the outcome after early seizures in 1197 acute stroke patients. Early seizures were not associated with inpatient death ($p = 0.56$) but were related to a better outcome, equivalent to increased SSS score of 5.7 points , $p = 0.002$. Mortality and morbidity of stroke outcome itself seem to depend on the underlying cause. Until today, many population and hospital based studies have been performed examining the epidemiology, pharmacological management, and overall outcome of post stroke seizures and post stroke epilepsy. More research is needed to focus on their impact on stroke outcome and timing of starting anticonvulsant therapy and the duration of treatment. Moreover, age specific outcome data and the effect of different strategies for its management (for example, community based compared with hospital based), and specific health related quality of life and health utility index measures relevant to post stroke epilepsy are also required for a better understanding and optimal management of this clinical condition.

Key Points

- Seizure and epilepsy after stroke is common.
- Late onset seizure has a higher recurrent rate compared with early onset seizure after a stroke.
- Atypical seizure forms can occur, particularly in the older people, and a high index of suspicion is required for the correct and early diagnosis of post stroke seizure.
- Diagnosis of post stroke epilepsy has considerable social and psychological impact on the patient and a multidisciplinary team approach, therefore, is essential in its management

References

1. Luhdorf K, Jensen L K, Plesner A M. Etiology of seizures in the elderly. Epilepsia. 1986; 27: 458–463.
2. Olsen T S. Post stroke epilepsy. Curr Arthroscler Rep. 2001; 3: 340–344.
3. Burn J, Dennis M, Bamford J. *et al* Epileptic seizures after a first stroke: the Oxfordshire community stroke project. BMJ. 1997; 315: 1582–1587.
4. Argyriou A A, Papapetropoulos S, Polychronopoulos P. *et al* Psychological effects and evaluation of health related quality of life in patients suffering from well controlled epilepsy. J Neurol. 2004; 25(1): 310–313.
5. Godfrey J W, Roberts M A, Caird F I. Epileptic seizures in the elderly: II. Diagnostic problems. Age Ageing. 1982; 11: 29–34.
6. Cockerell O C, Johnson A L, Sander J W. *et al* Mortality from epilepsy: results from a prospective population based study. Lancet. 1994; 33(4): 918–921.
7. The Royal College of Physicians of Edinburgh Better care for children and adults with epilepsy—a consensus conference. J R Coll Physicians Edinb. 2003; 3(3): 2–3.
8. Kramer G. Epilepsy in the elderly: some clinical and pharmacotherapeutic aspects. Epilepsia. 2001; 4(2): 55–59.
9. Bladin CF, Alexandrov AV, Bellavance A, *et al*. Seizures after stroke. A prospective multicenter study. *Arch Neurol.* 2000; 57(16): 17–22.
10. Silverman IE, Restrepo L, Mathews GC. Poststroke seizures. *Arch Neurol.* 2002; 59: 195–201.