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Case Report

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Opium overdose: "a black sheep in acute stroke management"

Abstract

We report a case of an 81 year old elderly man presented in the emergency department with a 1 hour history of sudden unconsciousness presented to a tertiary care hospital in Islamabad Pakistan. He was investigated on the lines of acute vascular event. He was being considered for intravenous thrombolysis for possibility of posterior circulation ischemic stroke. Other differential included opium overdose due to his chronic addiction. He was given 0.4mg of intravenous naloxone to which he responded within 1 minute and regained his consciousness. This case highlights the importance of considering opium overdose as a differential diagnosis in acute stroke care setting for neurologists and emergency physicians as it mimics acute stroke.

Keywords: acute ischemic stroke, stroke mimics, opium overdose, naloxone

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Salman Mansoor,[1] Shoab Saadat,[2] Salman Assad,[3] Abhishak,[4] Shayan Qadir,[5] Waseem Tariq Malik,[6] Raja Farhat Shoaib,[7] Khwaja Junaid Mustafa[8]

[1]Department of Neurology, Cork University Hospital, Cork Ireland
[2]Department of nephrology, Shifa International Hospital, Pakistan
[3]Shifa College of Medicine, Pakistan
[4]Department of Emergency, Shifa International Hospital, Pakistan
[5]Khyber Medical College, Khyber Medical University, Pakistan
[6]Department of Neurology, Shifa International Hospital, Pakistan
[7]Department of Neurology, Shifa International Hospital, Pakistan
[8]Shifa International Hospital, Pakistan

Correspondence: Salman Mansoor, Registrar Neurology, Department of Neurology, Cork University Hospital, Cork Ireland, Email salmanmansoor.dr@gmail.com

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Introduction

A fairly large bulk of patients 5-30% which present to emergency department with stroke mimics Seizures, migraine, psychogenic disorders, and toxic/metabolic causes are the top mimickers.[1-7]

Case report

We present a case of an 81 year old elderly gentleman presented in the emergency department with a 1 hour history of sudden unconsciousness while he was having his breakfast. A stroke code was announced and neurology was consulted. In his medical history he was Diabetic type 2 for 25 years and hypertensive for 20 years. He was taking oral hypoglycemics (Metformin, Gliclazide) and antihypertensives (Zestril) with adequate compliance. In his personal history he was also an oral opium addict for last 40 years. On examination he was a thin old gentleman not oriented in time, place and person. His Glasgow Comma Scale (GCS) for conscious status was E2M5V1=8/15. Vital signs were a blood pressure of 160/90mmHg, heart rate was 90/minute, and temperature of 98.6 Fahrenheit. Neurological exam revealed central gaze, doll's eye and corneal reflexes were intact. Pupils were 2mm in size which were sluggish to direct and indirect light and nystagmus was not observed. Facial sensation to pain was intact assessed by grimace with a preserved facial symmetry. His tongue was central without any fasciculation. Uvula was central and gag reflex was present. Motor exam showed normal bulk and tone. Power in his limbs to painful stimulus was 3/5 in both upper limbs and 2/5 in both lower limbs approximately. Deep tendon reflexes were 2+ in upper limbs and 1+ in both lower limbs with bilateral flexor plantar responses. Sensory examination to pain was grossly adequate in all limbs. Neck was supple with no signs of meningeal irritation. Systemic examination was normal with no heart murmurs, abnormal breath sounds or visceromegaly. Laboratory workup is shown in Table 1.

Computed tomography (CT-scan) of the brain acquired 1 hour 30 minutes into his symptoms showed mild cortical atrophy, normal sized ventricles and no intracranial bleed. He was being considered for intravenous thrombolysis for possibility of posterior circulation ischemic stroke. Other differential included opium overdose due to his chronic addiction. He was given 0.4mg of intravenous naloxone to which he responded within 1 minute and regained his consciousness. GCS improved to 15/15. Stroke code was called off. He was admitted for 24 hours during which he had restlessness and irritability. He was discharged after 2 days in stable condition with regular follow-ups in psychiatry and medicine clinics for long term rehabilitation for his chronic addiction.

Discussion

There have been many studies highlighting the most important mimics of stroke. In one of the studies, if the patient had decreased level of consciousness and normal eye movements, the odds of him suffering from a mimic increased. While odds decreased if the patient atrial fibrillation on EKG or history of angina.[8] This was well reflected in our patient as well. In another study cognitive impairment and abnormal signs in other systems suggested a mimic while if the exact onset time was known along the focal neurological signs the odds of having a stroke were increased. This was also found to be in line with our patient.[3] There have been many reports on stroke mimics secondary to medication toxicity.[9] As in our case, in one of the reports, a patient was found to present with aphasia (a relatively focal neurological deficit) after administration of IV fentanyl.[10] In another case there was a transient downbeat nystagmus after intravenous administration of the opioid piritramide.[11] This showed opioid to be more of a causative agent rather than a mimic only but nevertheless an important consideration in patients presenting with stroke like signs and symptoms.

Table 1 Complete blood picture, Coagulation profile, Serum elctrolytes, Renal functions, Blood glucose levels

Complete Blood Picture	Patient's Value	Normal Range
White blood cells	7 x10^3/uL	4.1-10.9x10^3/uL
Hemoglobin	11.5	13.2-17.5g/dl
Hematocrit	33.5	40-50%
Platelets	258 x10^9/L	150-400 x10^9/L
Coagulation Profile		
Prothrombin Time	1.11 seconds	11.4-14.2 seconds
International normalized ratio	1.01 seconds	25-35 seconds
Electrolytes		
Sodium	138 mEq/L	134-144 mEq/L
Potassium	3.3 mEq/L	3.6-5.0 mEq/L
Chloride	108 mEq/L	98-107 mEq/L
Bicarbonate	24 mEq/L	21-28 mEq/L
Renal Fuctions Test		
BUN	20 mg/dL	5-20 mg/dL
Creatinine	1.08 mg/dL	0.6-1.2 mg/dL
Blood Glucose Level		
Random Blood glucose	189 mg/dL	80-160 mg/dL

Conclusion

This case highlights the importance of considering opium overdose as a differential diagnosis in acute stroke care setting for neurologists and emergency physicians as it mimics acute stroke. A thorough detailed history may help clinicians consider alternative diagnoses and identifying opium overdose as a stroke mimic during complex, time-critical stroke evaluations and management.

Compliance with ethical standards

Conflict of Interest

Authors declare no conflict of interest or any funding source received for this study.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent

Informed consent was obtained from the patient included in this report.

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None.

Conflicts of interest

None.

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