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CASE REPORT: ACUTE ISCHEMIC STROKE IN A 65-YEAR-OLD MALE WITH MULTIPLE VASCULAR RISK FACTORS

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ABSTRACT

Ischemic stroke is a neurological emergency caused by the interruption of cerebral caused by the interruption of cerebral blood flow, most often due to thrombotic or embolic occlusion. It represents a significant proportion of cerebrovascular accidents worldwide, contributing heavily to mortality and long-term disability. This case review presents a 65year old male who suffered an acute ischemic stroke involving the left middle cerebral artery (MCA) territory. The patient's medical history revealed several predisposing factors including hypertension, diabetes mellitus, dyslipidaemia and a previous transient ischemic attack (TIA). Clinical assessment, diagnostic investigations and a multidisciplinary therapeutic approach were essential in his management. Emphasis is placed on timely diagnosis, risk factors modification and rehabilitation to prevent occurrence and enhance recovery.

INDEX TERMS: Ischemic stroke, Middle cerebral artery infarction, Hemiparesis, Hypertension, Diabetes mellitus, Antiplatelet therapy, Stroke rehabilitation, Patient counseling.

INTRODUCTION

Stroke is a major cause of morbidity and the second leading cause of death globally. Ischemic strokes account for approximately 85% of all stroke and are typically caused by arterial thrombosis or embolism resulting in reduced blood flow to the brain.[1] The middle cerebral artery is the most frequency affected vessel in anterior circulation strokes.[2] Common symptoms include hemiparesis, aphasia, visual field defects and altered consciousness depending on the affected brain region. The burden of stroke is amplified in developing countries due to rising prevalence of risk factors such as hypertension, diabetes, dyslipidaemia, smoking and secondary lifestyle.[3] Timely interventions can significantly reduce mortality and improve neurological outcomes.

CASE PRESENTATION

PATIENT DESCRIPTION

The patient, Mr X, is a 65year old male admitted to the Neurology Department on 3 June 2025, with acute neurological symptoms. He had a significant past medical history including hypertension (10 years), type 2 diabetes mellitus (5 years), dyslipidaemia and a prior transient ischemic attack (TIA) two years ago. He is a former smoker with a 30pack year history and a strong family history of stroke and diabetes.

PHYSICAL EXAMINATION

Upon admission, the patient was conscious but exhibited confusion and expressive aphasia. Vital signs included elevated blood pressure (178/96 mmHg), a heart rate of 88bpm and normal oxygen saturation (97%).

Neurologically, he had right- sided facial palsy and hemiparesis with a muscle strength score of 2/5. NIH Stroke Scale (NIHSS) score was 14, indicating a moderate to severe stroke. Reflexes were hyperactive on the affected side and the patient was unable to ambulate due to hemiplegia.

INVESTIGATIONS

Laboratory and radiological assessment revealed the following

- Blood test:

- The fasting blood sugar had increased to 162 mg/dL as compared to normal value 70-110 mg/dL.
- The HbA1c had increased to 8.2% as compared to normal value below 6.5%
- The serum cholesterol had increased to 235mg/dL as compared to normal value below 200mg/dL
- The LDL had increased to 150mg/Dl as compared to normal value below 100mg/Dl.
- The triglycerides had increased to 190mg/dL as compared to normal value below 150mg/Dl.
- The CRP had increased to 8.2mg/L as compared to normal value below 5mg/L.

- ECG:

  Showed left ventricular hypertrophy, indicative of long-standing hypertension

- CT Brain (non-contrast):

  Hypodensity in the left MCA territory consistent with an acute ischemic infarct.

DIAGNOSIS

Based on clinical presentation and radiographic imaging, the patient was diagnosed with acute ischemic stroke involving the left middle cerebral artery (MCA) territory.

TREATMENT

The patient was managed with pharmacological therapy and supportive care:

T. ECOSPRIN (ASPIRIN) 150 mg OD: Prevents clot formation. Take after food ton avoid stomach upset. T. CLOPITAB (CLOPIDOGREL) 75mg OD: works with aspirin to reduce stroke reoccurrence. Monitor for bleeding or bruising. T. ATORVA (ATORVASTATIN) 40 mg HS: It lowers cholesterol, stabilizes plaques. Take at night. May cause mild muscle pain. T. STEMETIL (PROCHLORPERAZINE) 5 mg TID: For systemic management of vertigo and nausea. Rehabilitation started early with passive limb exercise and speech therapy. Thrombolysis was not considered due to delayed presentation. T. PANTOCID (PANTOPRAZOLE) 40mg OD: It prevents gastric issues related to other drugs. T. RAMIPRIL 2.5 mg OD: Controls blood pressure and protects kidneys and heart. Monitor for cough or dizziness. T. GLIMESTAR M2 (GLIMEPIRIDE+METFORMIN) 2 mg/500 mg OD: Controls blood sugar, avoid skipping meals. Watch symptoms for hypoglycaemia. T. CITALOPRAM 10

mg OD: Used if mood symptoms or depression observed. Take in the morning. Watch for changes in mood or sleep.

PROGNOSIS

With a moderate NIHSS score and timely supportive care, the patient's prognosis was cautiously optimistic. Improvement in speech and motor function was observed by day 4 of hospitalization. Long term recovery was dependent on strict adherence to secondary prevention and rehabilitation.

FOLLOW UP

He was discharged on June 7, 2025 with scheduled follow ups:

- Bi-weekly neurology and physiotherapy reviews for the first month.
- Monthly follow ups thereafter.
- Regular monitoring of blood pressure, blood glucose and lipid profile.
- Scheduled reassessment of medication tolerance and efficacy every 3 months.
- Continue all medications as prescribed.

Medications

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DISCUSSION

Ischemic stroke, especially in elderly patients with multiple comorbidities, presents a high-risk scenario requiring timely diagnosis and intervention.[4] The MCA is the most commonly involved artery in anterior circulation strokes. Symptoms such as hemiparesis, aphasia and facial palsy are characteristic of left MCA infaracts.[5]

This patient had several modifiable risk factors such as uncontrolled hypertension, diabetes, hyper lipidaemia and smoking history. These factors promote atherosclerosis and plaque rupture, leading to vascular occlusion.[6] The cornerstone of stroke management lies in acute stabilization, secondary prevention using antiplatelets and statins and aggressive risk factor control.

Rehabilitation plays a pivotal role in improving post stroke functional outcomes. This include physiotherapy, occupational therapy and cognitive rehabilitation. Early mobilization and family involvement in care planning further enhance recovery and quality of life.[7]

PATIENT COUNSELLING

Disease education

The patient and family were informed that ischemic stroke results from a blood clot blocking a brain artery, causing tissue damage. Emphasis was placed on the urgency of symptom recognition and the need for immediate medical attention in future events.

Medication Guidance

Detailed counselling was given regarding drug purpose, dosage, timing and side effects. For instance, aspirin and clopidogrel were described as clot preventing agents, while atorvastatin was explained to lower cholesterol and stabilize plaque.

Lifestyle Advice

- Adopt a low-salt, low-fat and high-fiber diet.
- Begin gradual physiotherapy and mobility exercises.
- Avoid smoking and alcohol.
- Engage in stress- reducing activities such as yoga or meditation.
- Monitor blood pressure and sugar regularly.
- Ensure regular follow up visits.

Emerging Awareness

Caregivers were trained to recognize signs of stroke recurrence such as sudden weakness, speech disturbance and facial droop and were advised to seek immediate medical help.

CONCLUSION

This case illustrates the critical importance of early recognition and integrated management of ischemic stroke. Proper diagnosis, medication therapy, rehabilitation and lifestyle interventions are essential to improve prognosis and reduce recurrence. Patient education and regular follow-up remain vital in ensuring adherence and long-term recovery. Interdisciplinary care and support systems are key to achieving holistic stroke rehabilitation.

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