

# The Role of the Clinical Pharmacist in A Case of Losartan-Induced Faintness and Dysarthria

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**Abstract—** Background: A common first-line antihypertensive the medication losartan has excellent absorption after being taken orally and undergoes extensive first-pass metabolic processes. Losartan commonly produces feelings of dizziness, headaches, lethargy, nausea, vomiting, impaired vision, and anaemia as side effects.

**Case summary:** We discuss the case of a 59-year-old Yemeni lady who consumed losartan and had fainting and dysarthria. The patient was started on 50 mg daily oral losartan monotherapy for mild hypertension. After 12 days of utilizing the medication, she relocated to the emergency department in Saudi German Hospital in Sana'a city with dizziness, faintness, dysarthria, lightheadedness with generalized weakness. The in-hospital neurological specialist suspected the patient had a transient ischemic attack. On examination, her blood pressure was found to be 150/86, and her heart rate was 72. The patient was treated in the hospital as a stroke patient for five days and discharged with stroke medications. After discharge, on the second day, the patient has the same previous symptoms.

**Discussion:** There was no proof of any other conceivable physiological, infective, naturally occurring, or other pathologic causes of dysarthria, save losartan itself. A clinical pharmacist discovered adverse drug reaction probability It was "probable" that oral losartan caused the development off fainting and dysarthria in this patient. The drugs for hypertension were changed by the clinical pharmacist to amlodipine 5mg. After 3 days, the patient was stable, and the symptoms resolved.

**Conclusions:** This case report suggests that losartan could induce faintness and dysarthria as side effects

**Index Terms—** hypertension, losartan, faintness, dysarthria, clinical pharmacist

## I. INTRODUCTION

High blood pressure, also known as hypertension, is the number one modifiable risk factor for morbidity and death globally. The measurement of elevated blood pressure presents the foundation for diagnosing and treating hypertension, and it can be utilized to begin or rule out costly investigations and long-term treatment options. Inadequate measurement methods or

the use of incorrect BP measuring instruments can lead to overdiagnosis and unneeded therapy, or underdiagnosis and exposure to dangerous cardiovascular illness. (1). JNC 8 recommended treatment of hypertension and Angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor antagonists are first-line treatments for hypertension, and they are particularly recommended for diabetic patients because of their Reno protective benefits (2). Losartan, an angiotensin receptor antagonist, suppresses the production of angiotensin II both potently and selectively. Losartan inhibits all of angiotensin II's actions, including aldosterone secretion. Losartan is highly absorbed after oral treatment and has considerable first-pass metabolism (3). Losartan's most common adverse effects are headaches, dizziness, lethargy, nausea, vomiting, vision impairment, and anaemia. In this case study, we look at a 59-year-old Yemeni lady who had unexpected faintness and dysarthria after taking oral losartan 50 mg. Her symptoms resembled stroke-like symptoms, necessitating hospitalization and strict observation. Her symptoms improved after her healthcare pharmacists prescribed amlodipine 5mg for hypertension. In Yemen, this is the first incidence of faintness and dysarthria correlated with losartan usage.

## II. CASE SUMMARY

A 59-year-old Yemeni A woman presented to the hospital's emergency department. at Saudi German Hospital in Sana'a; a city in Yemen with dizziness, faintness, dysarthria, lightheadedness with generalized weakness. Her symptoms began at 10:15 am on the day 12-1-2022 of presentation after she took her twelve doses of losartan 50 mg that was recently prescribed by the cardiologist in the same hospital after stopping the previous medication for hypertension spironolactone 25 mg. She lost consciousness for 10 min, facial droop on the left side, and she lost motor and sensory deficits and fell. A computed tomography, or CT, scan of the head revealed no acute abnormalities (Figure 1). An MRI examination of the brain

revealed no acute intracranial disease (Figure 2). Her physiological parameters were stable: temperature 36.4, pulse 72, respiration rate 20, blood pressure 150/84, and oxygen saturation 92% in room air. Her test outcomes were equally unremarkable (Table 1). She was subsequently brought to the inpatient unit as a stroke patient due to her persistent complaints of widespread weakness. An investigative neurologist expert evaluated her as having a stroke. patient. During hospitalization, she was managed for 5 days as a stroke patient and losartan 50 mg continued (Table 2). After 5 days she was discharged with her medications (Table 3). One day after discharge the same symptoms return (dizziness, faintness, dysarthria and vomiting). Her relative is a clinical pharmacist who believes the symptoms began when the physician switched

her from spironolactone 25 mg to losartan 50 mg. Her relative then decided to discontinue losartan and change to amlodipine 5mg. After 3 days from the new anti-hypertension drug, the patient has felt well without dizziness, faintness, dysarthria and vomiting. All discharge medication was stopped for the patient by the clinical pharmacist and the patient was on amlodipine 5mg and aspirin 75 mg only.

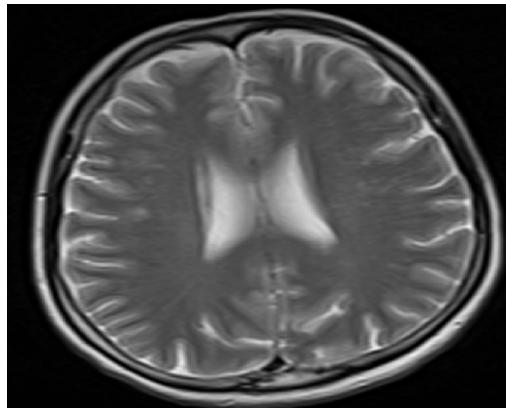


Figure 1: A computed tomography examination of the brain revealed no signs of acute intracranial disease.

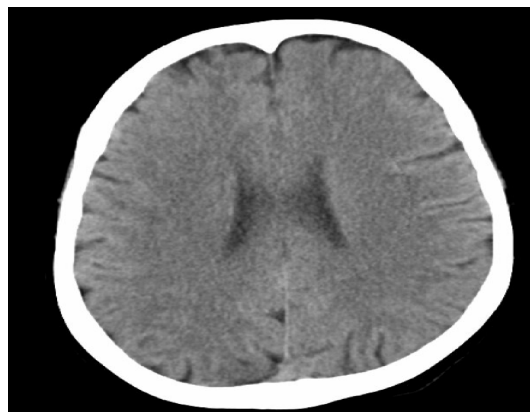


Figure 2: Magnetic resonance imaging of the brain demonstrates no acute intracranial disease.

TABLE 1: BLOOD INVESTIGATION DURING LOSARTAN THERAPY

Parameters detected	Values	Normal range
WBC	3	4-11
RBC	4.3	4.2- 5.4
HGB	12.8	12-15
PLT	286	150-440
Neutrophil	40	40-70
Lymphocyte	44	20-40
Monocyte	9	2-10
Eosinophil	7	1-7
Basophil	0	0-25
Sodium	135	134-146
Potassium	3.7	3.6-5
Calcium	9.4	8.4-10.2
Glycosylated HB	6.2	4-6.2
Cholesterol	175	Less than 200
HDL	40L	40-50
LDL	124	Less than 100
Triglyceride	65	Up to 150
CRP	18	Positive more than 5 Negative less than 5
Troponin	Negative	0-0.014
D-Dimer	0.24	Less than 0.50
Creatinine	0.5	0.5-0.9

TABLE 2: MEDICATION IN ADMISSION WARD WITH LOSARTAN THERAPY (12-16/1/2022)

Medication	Start day	End day
Clexan 60 mg S.C once daily	12/1/2022	16/1/2022
Aspirin 75 mg tab once daily	12/1/2022	16/1/2022
Plavix 75 mg tab once daily	12/1/2022	16/1/2022
Lomac 40 mg injection once daily	12/1/2022	16/1/2022
Somazina sachet 1000 mg bid	12/1/2022	16/1/2022
Deanxit tab once daily	12/1/2022	16/1/2022
Betasilk 16 tab once daily	12/1/2022	16/1/2022
Losartan 50 mg tab once daily	12/1/2022	16/1/2022

TABLE 3: DISCHARGE MEDICATION ON 17/1/2022

Drug Description	Route of admin	Duration
Aspirin 75 mg tab once daily	Oral	1 month
Plavix 75 mg tab once daily	Oral	1 month
Somazina oral drops 100 mg (30 ml) 1 ml BID	Oral	1 month
Betasilk 16 tab once daily	Oral	1 month
Losartan 50 mg tab once daily	Oral	1 month
Pantoloc 40 mg tab once daily	Oral	1 month
Zolofit 50 mg tab 1/5 once daily	Oral	1 month

## V. REFERENCES

## III. DISCUSSION

As we all know, most healthcare providers ignore the role of clinical pharmacists in resolving medication errors and investigating drug side effects. For the above patient, she began to experience the effects of losartan on the third day, when she began to experience vomiting, dizziness, and increased saliva secretion. She informed her husband about the problem, and her husband suggested that it could be due to the new anti-hypertension drug. She started experiencing new-onset dizziness, faintness, dysarthria and vomiting after taking her 12 doses of losartan in 12 days. No one in the patient's family has had faintness, dysarthria, or a stroke. Her complete blood count was within normal ranges, and she had no fever. Given the null MRI results, the patient's signs and symptoms were improbable to be caused by an acute intracranial process. Her medication was changed by the clinical pharmacist use an alternative initial-line antihypertensive amlodipine 5mg. The patient after 3 days the patient was stable and there were no symptoms of faintness, dysarthria and generalized weakness.

Our case report is consistent with another Case of a 56-year-old Caucasian guy. complaining of uncontrollable tremors, dysarthria and generalized weakness when he uses losartan 50 mg daily for his hypertension (4). Also, this case report is consistent another study reported a 73-year-old Indian male using losartan 50 mg daily for his hypertension then he has complained of severe hyponatremia and generalized weakness (5).

Losartan may cause dizziness, faintness, dysarthria, and vomiting, according to an online search (6). According to the Naranjo adverse medication response likelihood scale, there was a link between losartan administration and faintness and dysarthria, which is a highly unusual observation (7). In patients on losartan who report symptoms of dizziness, faintness, dysarthria, and vomiting, Physicians ought to keep a high level of concern and rule out generalized weakness.

## IV. CONCLUSION

In this case report of new-onset faintness and dysarthria in a Yemeni woman, most properly Associated with the usage of losartan 50 mg. The patient's complaints were resolved following the intervention. of a clinical pharmacist. These symptoms are very rare and affect neurological by losartan. The role of the clinical pharmacist is very important in Yemen hospitals to avoid medication errors and adverse drug effects. Physicians should accept the intervention of clinical pharmacists for patients' life security and decrease costs.

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