

ACCELERATED HYPERTENSION IN DIABETES & CKD COMORBIDITY: A CASE REPORT

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ABSTRACT

Background: Malignant hypertension is a condition characterized by severe hypertension and multi-organ ischemic complications. The underlying cause of malignant hypertension, which can be primary or secondary hypertension, is often difficult to identify and this can affect the treatment outcomes. **Case presentation:** A 52-year-old woman presented with severe hypertension and acute renal failure. Initial evaluation demonstrated accelerated hypertension with DM and CKD, The Therapy was initiated and discharged after the patient got stabilized. **Conclusion:** This case highlights the complication and comorbidities associated with the accelerated hypertension and the role of counselling and medication adherence.

KEY WORDS: Accelerated HTN, Malignant HTN, D/M with HTN, Renal Failure.

BACKGROUND AND INTRODUCTION

Malignant hypertension is a condition characterized by severe hypertension above 200/100 mm of Hg and multi-organ ischemic complications. Incidence of malignant hypertension has remained stable over the years as it is not so common and frequently occurring, although mortality have decreased with the introduction of antihypertensive therapy. However, progression to end stage renal disease remains a significant cause of morbidity and mortality in accelerated hypertension. The underlying cause of malignant hypertension can be primary or secondary hypertension, and identification of the latter is mandatory for choosing the correct treatment in order to control blood pressure and improve end-organ damage.^[1] However, correct diagnosis can be challenging.^[1] Majorly the secondary causes are still the contributory for accelerated hypertension. The emergency drug administration via parenteral route is still the primary management of this condition. Secondary causes of accelerated HTN

include renal parenchymal causes such as chronic glomerulonephritis, renal vascular causes such as renal artery stenosis (RAS), endocrine causes such as hyperthyroidism and pheochromocytoma, and pregnancy-related causes such as preeclampsia and eclampsia. Renal causes are the most common and should be sought for all cases of suspected secondary HTN.^[2] This case highlights the difficulty in differentiating between primary and secondary hypertension, particularly when the patient presents with acute renal failure.

Case Presentation

A 52 years old female patient was present with chief complaints of giddiness, Headache, vomiting (4-5 episodes containing food particles) in the emergency department of a tertiary care teaching hospital. The patient & family gave history of K/C/O Diabetes mellitus and Chronic renal failure in the medical management and taking the irregular medication. On examination, there was change in rhythm of pulse & Bp was elevated upto 200/110 mm of Hg, Pulse rate 66 beats / min, respiratory rate 22 c / min, blood sugar levels were 166 mg/dl [RBS], SpO₂ levels were identified to be normal at 98. Later, after the interval of 3 h, repeated test shows almost normal Vitals after emergency management by parenteral anti-hypertensives, obtained parameters were like blood pressure 164/90mm Hg, respiratory rate 18 – 20 c / min, SpO₂ levels were identified to be normal at 98, the pulse rate was 64 beats/min but the ECG appeared to be normal throughout the duration of case observation. Again, the tests were run after intervals of 6 h most of his vital reports were normal but the BP of subject was 150/90 mm of Hg. The patient was admitted in hospital for 5 days duration after her vitals became stable.

Investigations

- ✓ The ECG is the major laboratory test to rule out the cardiac complication, which is found to be normal over the period of hospitalization.
- ✓ CT scan was suggested but patient denied due to the financial constraint.
- ✓ Serum electrolytes along with Hepatic function tests were normal.
- ✓ Blood glucose levels were around 160mg/dl. And patient was taking OHA.
- ✓ The Serum creatinine level were elevated i.e. 3.2 mg/dl and serum urea was 82 mg/dl.

Treatment

The patient received the emergency medication in the casualty ward and receives following medication after the hospitalization.

- ✓ Tab Amlodipine 5 mg 1-0-0

- ✓ Tab Gliclazide + Metformin 80 + 500 mg 1-0-1
- ✓ Inj Ranitidine 50 mg 1-0-1
- ✓ Inj Labetalol 20 mg stat (Slow IV)
- ✓ Tab Betahistine 8 mg 1-0-1
- ✓ Tab Aspirin 150 mg 0-1-0
- ✓ Tab Atorvastatin 20 mg 0-0-1
- ✓ Tab Calcium 500mg 0-1-0

Sublingual Nifedipine at a dose of 10 mg or IV Labetalol 20 mg is treatment of choice for accelerated hypertension, Other treatment were given to patient depending on the comorbidity.

Discharge and Followup

The emergency followed by continuation therapy was provided to the patient over the duration of hospital stay along with the other therapy. The patient was discharged after the 5 days of hospital admission. During discharge the vitals were stable, laboratory parameters were normal. The patient was kept on following medication, Tab Amlodipine 5 mg 1-0-0, Tab Aspirin 150 mg 0-1-0, Tab Atorvastatin 10 mg 0-0-1, Tab Glimepiride + Metformin 1 + 500 mg 1-0-1. And the patient was discharge and called up on follow up after 15 days.

DISCUSSION

Patient appeared with accelerated hypertension need prompt care to stabilize the vitals.^[3] If left untreated it may lead to the complication of various organs [multiple organ damage] and sometimes mortality. The patient appeared in hospital within a quick period of time and got stabilized in a quick span of time after administration of parenteral Labetalol. However, there are other alternative drugs which can be prescribed to cure the emergency condition along with combination of therapy to endorse the concurrent co morbidity.

CONCLUSION

The patient reported in this case report has a history of HTN along with D/M and CKD, The patient hospitalized with diagnosis of Accelerated HTN associate with comorbidity, The patient was administered with Parenteral Antihypertensive with other required therapy, after the 5 days of hospitalization, patient got stabilized and discharged.

Key Messages

- Accelerated HTN is majorly due to the secondary cause.
- It should be diagnosed and treated early in order to prevent multiple organ damage.
- Lifestyle modification and medication adherence are key for its prevention.

List of Abbreviations

HTN- Hypertension

D/M- Diabetes Mellitus

CKD- Chronic Kidney disease

CT-Scan- Computed Tomography Scan

ECG- Electrocardiograph

OHA- Oral Hypoglycemic agent

REFERENCE

1. Michelli et al. A case report of malignant hypertension in a young woman. BMC Nephrology, 2016; 17: 65.
2. Pranav Ish, Harpreet Singh, S. Anuradha, Richa Dewan, Accelerated Hypertension. Medknow: Treatable Yet Underdiagnosed, 2018; 5(01): 89-91.
3. Gordon S. Accelerated Hypertension in a 64-Year-Old White Woman. Clinical conference, 1984; 6: 767-773.