ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 13, Issue, 01, pp.15625-15626, January, 2021

DOI: https://doi.org/10.24941/ijcr.40509.01.2021

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE REPORT

EMERGENCY MANAGEMENT IN HYPERTENSIVE CRISIS: A CASE REPORT

***Mishra Meenu, Shivhare Shwetal and Sharma Vivek**

Department of Kayachikitsa (General Medicine), Pt. Khushilal Sharma Govt.(Auto.) Ayurveda College and Institute, Bhopal, Madhya Pradesh, India

ARTICLE INFO

Article History:
Received 17th October, 2020
Received in revised form
19th November, 2020
Accepted 11th December, 2020
Published online 30th January, 2021

Key Words:
Hypertensive urgency,
Antihypertensive drugs.

ABSTRACT

Hypertensive crisis is an uncontrolled hypertension, defined as a systolic Blood Pressure >180mmHg or a diastolic Blood Pressure >12OmmHg. Hypertensive crisis can be classified as a hypertensive urgency and emergency depending on end organ involvement including cardiac, renal & neurologic injury. Hypertensive emergency characterized by severe elevation in Blood Pressure with evidence of impending or progressive target organ dysfunction. Hypertensive urgencies are associated with severe elevation of Blood Pressure without progressive target organ dysfunction. Most sufferers (85%) of hypertension are asymptomatic and hence early diagnosis is the problem. This case report is presentation of hypertensive urgency of 60 years old male patient, which is well managed by modern drug therapy under the supervision of allopathic physician. This case report highlights the pharmacological role of antihypertensive drugs in hypertensive urgency and helped to control this severe condition to preceding life threatening.

Citation: ***Mishra Meenu, Shivhare Shwetal and Sharma Vivek.*** "Emergency management in hypertensive crisis: a case report", *International Journal of Current Research*, 13, (01), *15625-15626*.

INTRODUCTION

HTN is a long term medical condition in which the BP in the arteries is persistently elevated. HTN is the silent killer of mankind, most sufferers are asymptomatic & hence early diagnosis is a problem. Prevalence for hypertension in India is 29.8%.

Classification of BP (joint national committee)

Category	Systolic BP (mmHg)	Diastolic BP (mmHg)
Normal	<120	<80
Pre hypertensive	120-139	80-89
Stage 1	140-159	90-99
Stage 2	≥160	≥100

In more than 95% of cases, however no specific underlying cause of HTN can be found. Such patients are said to have essential hypertension or primary hypertension. Secondary hypertension caused by alcohol, obesity, pregnancy, renal dysfunction, endocrine disease, Cushing's syndrome, Conn's syndrome, Thyrotoxicosis, drugs & Coarctation of aorta etc. Hypertension is usually asymptomatic until the diagnosis is made at a routine physical examination or when a complication arises. In some patients the symptoms will develop like Headache, Blurred vision, Dizziness, Nausea, Vomiting, Fatigue, Epistaxis, Chest pain, SOB etc.

Investigation of HTN includes confirm the diagnosis by obtaining accurate, representative BP measurements. Identify contributory factors- urine analysis for blood, protein & glucose. Blood urea, Electrolytes and Creatinine, Blood glucose, Thyroid profile, Serum total and HDL cholesterol and 12 – lead ECG also important. The objective of antihypertensive therapy is to reduce the incidence of adverse cardiovascular events, particularly CAD, Stroke and HF. HTN mainly managed by non drug therapy and drug therapy. Drug therapy includes diuretics, ACE inhibitors, ARBs, CCBs, B-blocker, A-blocker, Vasodilator, Anti-platelet drug and Statins. This case report presented the pharmacological role of antihypertensive drugs in the management of hypertensive urgency.

Case Report

A 65 years old male patient diagnosed with OA on 5th of July 2019 & admitted in male general ward of Pt. K.L.S. Govt. Ayurveda Hospital, Bhopal with 37977 OPD no. and 1948 IPD no. At the time of admission there was no history of HTN/DM & having complaints of burning throat, bilateral knee joint pain & incontinence with frequency of micturition. He was non smoker & non alcoholic, his father had hypertension. On 6th of July 2019 at 2:30pm examination revealed BP was 200/120mmHg with heart rate 72bpm. There were no heart murmurs, his lungs were clear. There was trace generalised anasarca. Patient was administered Amlodipine 5mg orally, after one an hour BP was persist 200/120mmHg

after that contacted the MBBS Physician by telephonically at 3:35pm his instructed to Iso-sorbide-di nitrate10mg sublingually. At 3:49pm BP was 170/110mmHg as per physician interventions Ecosprine 75mg given and ECG was taken immediately which revealed undefined abnormal findings & after looking at the ECG physician instructed to repeat Amlodipine 5mg and monitor BP half hourly. At 7:00pm BP was 120/100mmHg with mild headache. Inj. Lasix 10mg/ml administered to patient & he was kept in hospital overnight and felt better next morning with BP 120/96mmHg. The patient was discharged on Tab Telpres Am o.d., Tab Moxon 0.3mg b.i.d., Tab Urimix 0.4mg b.i.d. daily for 1week which is advised by MBBS Physician. Lab investigation showed that slightly elevated lipid profile. The Blood glucose, RFT and Echo were normal.

DISCUSSION

In this case report patient had family history of hypertension. There was no specific cause for HTN so presented case underlying the essential hypertension. This case report has been planned to evaluate the effective emergency management in hypertensive urgency. In this emergency management firstly Amlodipine 5mg was given which is a CCBs, this medicine blocks the movements of extracellular calcium into the cells and causing vasodilation and decreased heart rate. After that Isosorbide di nitrate 10mg was given SL which is a venodilator drug that decreases venous return to heart by reducing preload of heart & prevents the muscles from tightening and arteries from narrowing resulting in reduced BP. Then Ecosprine 75mg was given orally which is an antiplatelet drug, the benefits of this drug is thought to outweigh the risks in hypertensive patients like reducing cardiovascular risk which may cause bleeding, particularly intracerebral haemorrhage etc. By using above three drugs therapy, significant reduction in elevated BP has been achieved. For generalised anasarca inj. Lasix 10mg/ml was given which is diuretic drug and helps the kidney to inhibit the sodium & water reabsorption in the DCT, ascending limb and loop of henle and acts by reducing extracellular fluid volume and cardiac output and they help to counteract the hypertensive effect.

Conclusion

The summary of this case report highlights the hypertensive urgency which is acute with marked increase in BP & there is no further end organ damage. By antihypertensive drugs like CCBs, vasodilator, anti-platelet & diuretics significantly reduce BP in hypertensive urgency.

Abbreviations

- ACE: Angiotensin Converting Enzme
- ARBs: Angiotensin Receptor Blockers
- BP: Blood Pressure
- CAD: Coronary Artery Disease
- CCBs: Calcium Channel Blockers
- DCT: Distal Convoluted Tubule
- ECG: Electro cardio gram
- Echo: Echocardiography
- HDL: High Density Lipoprotein
- HF: Heart Failure
- HTN: Hypertension
- OA: Osteoarthritis
- RFT: Renal Function Test
- SL: Sublingual
- SOB: Shortness of Breath

REFERENCES

H Ralston Stuart, D Penman Ian, et. Al., Davidson's Principles and Practice of Medicine, 23rd edition 2018, Ch. 16, Page no. 508-513.

Mohan Harsh, Textbook of pathology, 7th edition 2015, Ch.14, Page no.417.

Mehta P.J., Mehta P. Nihar, et. Al., Practical Medicine, 21st edition 2010, Ch.2, Page no. 48-49.

Tripathi KD, Essentials of Medical Pharmacology, 7th edition 2013, Section 8, Page no. 560, 571, 573 & 574.

https://www.sciencedirect.com/science/article/pii/S0019483219304201.

****