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Case Report on 48 years old male patient with known case of hypertension with heart Failure and Chronic Kidney Disease

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ABSTRACT:

Introduction: High blood pressure, or hypertension, affects about a billion people globally and is a primary cause of morbidity and mortality. A systolic blood pressure (SBP) of 140 millimetres of mercury (mm Hg) or a diastolic blood pressure (DBP) of 90 millimetres of mercury (mm Hg), or the use of antihypertensive medication is considered hypertension.

The goal of this research was to see how much antihypertensive medications' influence on heart failure (HF) is mediated by their influence on renal function. Variations in the rate of incident HF between ALLHAT patients given lisinopril, amlodipine, or doxazosin against those given chlorothiazides were thought to be due to a dynamic shift in kidney function.

Main symptoms and/or important clinical findings: A case of 48yrs male having complaints of severe headache from 2 days, Nose bleeding, confusion or fatigue, chest pain , breathlessness from 2 days.

Main Diagnosis, therapeutic interventions and outcomes: A 48 yrs of male patient came with the chief complaints severe headache from 2 days, nose bleeding, fatigue or confusion, chest pain, fever, difficulty in breathing from 2 days and all investigation are done . Patient Diagnosed as known case of hypertension . Then antihypertensive medication are given to the patient.

Conclusion: The patient had a history of high blood pressure. This instance demonstrated that good blood pressure control is critical for renal function recovery, even if it takes a long period.
Keywords: breathing difficulty, hypertension, cardiovascular disorder, Chronic kidney disease antihypertensive drugs.

INTRODUCTION:

Hypertension, sometimes known as "High blood pressure" is a frequent condition that can result in a variety of complications. A of significant issues if left unaddressed When blood pressure is high, the blood

puts pressure on the heart. A lot of strain on the artery walls, which can lead to damage. In addition, When the heart muscle needs to work harder to pump blood against high blood pressure, it thickens and enlarges, just like any other muscle (think of a weight lifter).[1]

Hypertension is a common occurrence gradually and without symptoms until a catastrophic event, It can happen to you, such as a heart attack, stroke, or heart failure. Fortunately, hypertension is a simple condition to diagnose and manage. so you can avoid suffering. [2]

The most common cause of hypertension is growing older. Hypertension affects more than half of people over the age of 60.Aside from age, a variety of variables can cause blood pressure to rise and hypertension to develop at a young age [3]

The heart, arteries, veins, kidneys, and brain are all involved in controlling blood pressure. Multiple systems in each person are commonly hyperactive, resulting to elevated blood pressure and hypertension.

As a result, when blood pressure medicine is needed, it's common to need to take many medications to lower blood pressure. [2]

Heart failure is linked to kidney dysfunction, which is a well-known risk factor (HF)[4-5], and it has the best predictive value of any of the HF risk score. [6] Renal transplantation improved the In individuals with end stage renal disease, the left ventricular ejection fraction (LVEF) is measured. End stage kidney disease (ESKD) and heart failure (HF) (LVEF). [6,7]

Although it's widely assumed that elevated blood pressure hastens kidney damage, there's more to it.of high blood pressure in the development of renal disease is still contested. [8]

While antihypertensive medicines like Because angiotensin converting enzyme inhibitors (ACEIs) and diuretics can produce a rise in serum creatinine, if this is accompanied by a reduction in congestion signs and symptoms, this effect may be considered as a favourable prognostic indication for HF[9,10]

It's unclear if decreasing kidney function is a reflection of a mechanism that causes hypertension individuals' HF to progress or a measure of HF severity [11]

Established chronic kidney disease (CKD) and heart failure are the focus of the diagnosis, pathogenesis, prognosis, and management of the cardiorenal syndrome (HF).

Patient information:

A 48 a male guy in his twenties presented to the hospital with the chief complaints of chest pain, severe headache from 4 days, vomiting, breathlessness, loss of appetite.

Primary Concern and symptoms of the patient : A 48 years old patient was visited to emergency department on dated 04/04/2021 with the chief complaints of chest pain severe headaches since 4 days, breathlessness, loss of appetite since 2 days , chest pain.

Medical ,family and psycho-social history:

Patient has no any previous history of Diabetes mellitus, Tuberculosis, chronic obstruction pulmonary disease . There are 6 family members are in her family. They have no any health issues except the patient who is admitted for further treatment.

Relevant past intervention with outcome:

Not reported

CLINICAL FINDINGS:

General Examination :

State of health: unhealthy

State of consciousness: conscious

Body built: obese

Hygiene: Good

General Parameter:

Height: 167 cm

Weight: 72 kg

Vital parameter:

Blood pressure: 140/90 mmHg

Temperature: 37.8oC

Pulse: 84beats/min.

Respiration: 24 breath/ min.

SpO2: 98%

Diagnostic Assessment :

- Tests in the laboratory ,A urine test (urinalysis) and blood tests, including a cholesterol test, may be recommended by your doctor.
- An electrocardiogram (ECG) (ECG or EKG). The electrical activity of your heart is measured in this quick and painless test.
- **CBC Investigation:** Hb.11.4g/dL, WBC 7900K/µL, platelets 3.8/µL, neutrophils 65%, and lymphocytes 26%. Patient with pH/pCO2/pO2/HCO3/TCO2/BE/SO2: 7,460/22/164,0/15,6/16,3/-6,4/99,5 according to blood Gas analysis

THERAPATIC INTERVENTION:

Medical Management:

The patient was Then given the inj piptaz 2.25gm iv TDS, inj Amlo 5 mg BD, inj levofloY 100ml OD,inj lantos 15 unit HS, Tab shelcal 500mg BD, syp nuphalac 30ml HS

Nursing Management :

Assess the patient condition carefully, vital sign should be assessed properly, monitoring the SpO2 properly. Administer the medication time to time and IV fluid should be administered, four hourly BP checked and recorded.

DISCUSSION:

One trial was discovered that looked into the broad topic of whether blood pressure monitoring reduces CVD and death in people (KQ 1A pharmacy-based screening programme (CHAP) with an on-call nurse to check high-risk patients and trained volunteer health educators to support patients with self-management. in Canadians aged 65 and older was used in this high quality cluster RCT. Screening was shown to be connected to a significant reduction in acute MI hospital admissions in the study. Furthermore CHAP has been shown in a recent study to have a substantial impact. Lower blood pressure in participants At the start of enrolment, he had high blood pressure. While firsthand confirmation of benefit is comforting, it is not universal. In addition, support interventions were included in this study, which may have compromised the outcomes of simple screening.[7]

The Franklin County trial in rural Maine, which was not included in this analysis because it was not an RCT, included BP screening as part of a community programme that included basic medical care, educational, counselling, and tracking support.

During the program's screening phase, cardiac, coronary, and stroke death rates in Franklin County were significantly lower than in one of two nonparticipating comparison counties., as well as across Maine. Overall, the evidence indicates to favour BP screening programmes [8] despite the lack of data to resolve the overarching question. Other related studies were reported[9-11]. Related studies on hypertension[12-14], heart failure and chronic kidney diseases[15-17] were reviewed.

The most common mechanism of incident HF According to this causal mediation analysis of the biggest randomised controlled trial of antihypertensive medication, eGFR change was significant in hypertension patients with normal baseline renal function. Even a ten percent rise in relative eGFR could account for up to half of all HF causes. The main and only HF cause was typically a significant (50%) change in eGFR. There were numerous distinctions.

Conclusion:

Noninvasive blood pressure readings should be assessed using ABPM (24hour, daytime, or overnight), w hich is a better predictor. A modest amount of research suggests, but does not prove, that HBPM can predict outcomes in the same way as other methods. Initial screening using office-based methods (manual sphygmomanometry or automated oscillometric methods) predicts hypertension differently from the ABPM criteria, leading to a considerable number of patients being diagnosed with hypertension .

According to limited studies, people with isolated clinic hypertension have results that are more similar to normotensive patients than hypertensive people. There is a danger of misdiagnosis and overtreatment if increased OBPM values is not verified first. Repeated readings and enhanced procedural control (e.g., automation) may improve diagnosis accuracy, according to limited evidence.

According to Those with high-normal blood pressure, older persons, those with an above-normal BMI, and African Americans have a higher prevalence of hypertension overall and during shorter rescreening intervals, according to studies with rescreening intervals of up to 6 years intervals. People without these risk factors had a significantly reduced cancer incidence at longer rescreening intervals in these studies (up to 6 years).

REFERENCES:

1. S, Gudbjornsdottir S, Manhem K, Rosengren A, Svensson AM, Miftaraj M et al. Blood pressure and complications in individuals with type 2 diabetes and no previous cardiovascular disease: National population based cohort study. BMJ. 2016; 354:i4070
2. https://www.medscape.com/answers/241381-7559/what-is-the-definition-of-hypertension-high-blood-pressure.
3. Jamie Kitt, Rachael Fox, Katherine L. Tucker, and Richard J. McManus Published online 2019 Apr 25. doi: 10.1007/s11906-019-0949-4
4. https://www.medscape.com/answers/241381-7559/what-is-the-definition-of hypertension-high-blood-pressure.
5. Schefold JC, Filippatos G, Hasenfuss G, Anker SD, von Haehling S. Heart failure and kidney dysfunction: epidemiology, mechanisms and management. *Nature Reviews Nephrology*. 2016;12:610-623
6. Pocock SJ, Ariti CA, McMurray JJ, Maggioni A, Kober L, Squire IB, Swedberg K, Dobson J, Poppe KK, Whalley GA, Doughty RN. Predicting survival in heart failure: a risk score based on 39 372 patients from 30 studies. *Eur.Heart J*. 2013;34:1404-1413
7. Wali RK, Wang GS, Gottlieb SS, Bellumkonda L, Hansalia R, Ramos E, Drachenberg C, Papadimitriou J, Brisco MA, Blahut S, Fink JC, Fisher ML, Bartlett ST, Weir MR. Effect of kidney transplantation on left ventricular systolic dysfunction and congestive heart failure in patients with end-stage renal disease. *J Am Coll Cardiol*. 2005;45:1051-1060
8. Freedman BI, Sedor JR. Hypertension-associated kidney disease: perhaps no more. *Journal of the American Society of Nephrology : JASN*. 2008;19:2047-2051
9. Ruggenenti P, Remuzzi G. Worsening kidney function in decompensated heart failure: treat the heart, don't mind the kidney. *Eur Heart J*. 2011;32:2476-2478
10. Blair JE, Pang PS, Schrier RW, Metra M, Traver B, Cook T, Campia U, Ambrosy A, Burnett JC, Jr., Grinfeld L, Maggioni AP, Swedberg K, Udelson JE, Zannad F, Konstam MA, Gheorghiade M, Investigators E. Changes in renal function during hospitalization and soon after discharge in patients admitted for worsening heart failure in the placebo group of the EVEREST trial. *Eur Heart J*. 2011;32:2563-2572.

11. Metra M, Cotter G, Gheorghiade M, Dei Cas L, Voors AA. The role of the kidney in heart failure. *Eur Heart J*. 2012;33:2135-2142.

12. Papalkar, P., S. Kumar, S. Agrawal, N. Raisinghani, G. Marfani, and A. Mishra. "Heterotaxy Syndrome Presenting as Severe Pulmonary Artery Hypertension in a Young Old Female: Case Report." JOURNAL OF GERONTOLOGY AND GERIATRICS 66, no. 2 (2018): 59–61.
13. Khatib, Mahalaqua Nazli, Dilip Gode, Padam Simkhada, Kingsley Agho, Shilpa Gaidhane, Deepak Saxena, B. Unnikrishnan, et al. "Somatotropic and Cardio-Protective Effects of Ghrelin in Experimental Models of Heart Failure: A Systematic Review." ANNALS OF TROPICAL MEDICINE AND PUBLIC HEALTH 7, no. 1 (February 2014): 30–42. https://doi.org/10.4103/1755-6783.145008.
14. Khatib, Mahalaqua Nazli, Anuraj Shankar, Richard Kirubakaran, Kingsley Agho, Padam Simkhada, Shilpa Gaidhane, Deepak Saxena, et al. "Effect of Ghrelin on Mortality and Cardiovascular Outcomes in Experimental Rat and Mice Models of Heart Failure: A Systematic Review and Meta-Analysis." PLOS ONE 10, no. 5 (May 27, 2015). https://doi.org/10.1371/journal.pone.0126697.
15. Manoj, M., Phatak, S., Lohchab, P., Marfani, G., 2019. Portal hypertension - Paraumbilical vein collaterals causing a medusa head appearance. Journal of Datta Meghe Institute of Medical Sciences University 14, 440–441. https://doi.org/10.4103/jdmimsu.jdmimsu_188_19
16. Jain, J., Banait, S., Tiewsoh, I., Choudhari, M., 2018. Kikuchi's disease (histiocytic necrotizing lymphadenitis): A rare presentation with acute kidney injury, peripheral neuropathy, and aseptic meningitis with cutaneous involvement. Indian Journal of Pathology and Microbiology 61, 113–115. https://doi.org/10.4103/IJPM.IJPM_256_17
17. Prasad, N., Bhatt, M., Agarwal, S.K., Kohli, H.S., Gopalakrishnan, N., Fernando, E., Sahay, M., Rajapurkar, M., Chowdhary, A.R., Rathi, M., Jeloka, T., Lobo, V., Singh, S., Bhalla, A.K., Khanna, U., Bansal, S.B., Rai, P.K., Bhawane, A., Anandh, U., Singh, A.K., Shah, B., Gupta, A., Jha, V., 2020. The Adverse Effect of COVID Pandemic on the Care of Patients With Kidney Diseases in India. Kidney International Reports 5, 1545–1550. https://doi.org/10.1016/j.ekir.2020.06.034