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Case Report on Management and outcomes of Renal Artery Stenosis with flash Pulmonary oedema

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ABSTRACT:

Introduction :- Renal artery stenosis (RAS) occurs when the arteries supplying blood to the kidneys narrow. The onset and remission of flash pulmonary edema are both quick. It's frequently associated with a single functional kidney and either bilateral or unilateral renal artery stenosis. A patient with flash pulmonary edema was treated with percutaneous therapy and stent implantation. **Present Complaints and Investigation:-** A unhealthy 60 year old admitted in AVBRH on dated 18 June 2021 with chief complaint high blood pressure, decrease kidney function, fluid retention, oedema in ankles and feet, fatigue, nausea and vomiting , unintentional weight loss, darkened skin, muscle cramps, changes in urine output. high blood pressure, fluid retention in legs, swollen ankles & feet, shortness of breath, obesity doctor advised the investigation Renal arteriography, Magnetic resonance angiography , Doppler ultrasound, CT scan, X – Rays, Haemoglobin 13.5 gm%, total RBC count 4.15 cu mm , granulocytes 75% lymphocytes 30% total platelet count 2.5 lacs/cu mm, urine test, urea count 16 mg/dl, creatinine count 0.66 mg/dl. Doctor diagnosed a renal artery stenosis. **Past History :-** patient diagnose with diabetes & Hypertension 10 years ago. Patients has no history of any operative procedure, patients has no history of any long term hospital stay the main diagnosis. **The Main Diagnosed Therapeutic intervention & outcomes:-** After physical examination & intervention doctor diagnose a case of renal artery stenosis with flash pulmonary oedema Tab. beta blockers, Tab. Metoprolol, Inj. aminophylline 10 ml bronchodilators, etc. he was took all treatment and outcome was good. His sign & symptoms was reduce. **Conclusion:-** He was response to all medication as well as doctor treatment & his recovery was good.

Keywords :- Renal artery stenosis, hypertension, Reno vascular, obstruction.

BACKGROUND :

Renal Artery Stenosis is a broad term that refers to any vascular lesion that causes the renal artery to narrow, reducing blood flow to the kidney. This illness encompasses a wide spectrum of pathologies. The most frequent type of atherosclerotic renal artery disease is fibromuscular dysplasia (FMD).

The epidemiology and treatment of atherosclerotic renal artery stenosis (ARAS), which accounts for the great majority of cases, will be the focus of this review. Three important clinical syndromes are linked to RAS. Ischemic neuropathy, hypertension, and unstable cardiac syndrome are all symptoms of ischemic neuropathy. A diagnosis of RAS main, on the other hand, can be an unintentional finding in a patient who is otherwise asymptomatic.

A diagnosis of ARAS is linked to a poor prognosis and, in many cases, atherosclerosis in other arterial beds. Clinicians have access to a wide range of diagnostic and therapy options for RAS, and with the introduction of endovascular intervention, choosing the optimal course for a given patient has only become more difficult.
Revascularization has shown some effect in several clinical trials, but not to the extent that many had hoped or expected. Given major limitations in study design and inherent bias, Padma over much of the available data is only modestly effective.[1]

Patient information :- Patient specific information A 60 year old male was admitted in Acharya Vinoba Bhave rural Hospital On 18 June 2021 with chief complaint of chest pain, breathlessness, headache fever , cough. Patient had on control systemic arterial hypertension for 15 years and had been treated with B blockers and angiotensin Receptor locker and Calcium channel blocker despite this thereby on physical examination his blood pressure was 1815 to 120 mm Hg with no difference between the two arms.
Primary concern and symptoms of patient :- Present case visited AVBRH OPD based on date18 June 2021 chief complaint of chest pain, breathlessness ,headache, fever ,cough since 2 months. Those where the primary symptoms which was observed at the time of admission.

Medical Family and Psychological History : Patient suffering from renal artery stenosis with flash pulmonary oedema since 2 months we belong to joint family and his wife in his family belongs to middle class family he had history of diabetes and he was a smoker .He was mentally stable conscious are oriented to date time and place he had mention good relationship with family members doctors nurses as well as patient also.

Relevant Past intervention with outcomes : History of renal artery stenosis of coronary angiography because of Chest pain since 2 months back for which he was hospitalize for
Fifteen days after investigation was observed he took treatment for that and his outcomes was not good.

Physical examination and clinical findings : State of health was unhealthy ,thin body ,weight loss, increases of Proteins in urine, oedema (especially in ankles in feet) breathing Difficulty. Weight is 50 kg height of patient is 158 CM decreased Kidney function. chief complaint high blood pressure, decrease kidney function, fluid retention, oedema in ankles and feet, fatigue, nausea and vomiting , unintentional weight loss, darkened skin, muscle cramps, changes in urine output. high blood pressure, fluid retention in legs, swollen ankles & feet, shortness of breath, obesity. Doctor advised the investigation Renal arteriography, Magnetic resonance angiography , Doppler ultrasound, CT scan, X – Rays, Haemoglobin 13.5 gm%, total RBC count 4.15 cumm , granulocytes 75% lymphocytes 30% total platelet count 2.5 lacs/cumm, urine test, urea count 16 mg/dl, creatinine count 0.66 mg/dl. Doctor diagnosed a renal artery stenosis.

Timeline:- currently patients was admitted for renal artery stenosis with flash pulmonary oedema. Tab. Lisinopril 80 mg, Tab. Metoprolol 100 mg, was given and investigation drugs beings studies to treat renal artery stenosis with flash pulmonary oedema.

Diagnostic assessment :- During physical examination and investigation are diffuse by Ultron and 2 pulling oedema, increase of proteins in urine continued high blood pressure all routine blood test was done. investigation Renal arteriography, Magnetic resonance angiography , Doppler ultrasound, CT scan, X – Rays, Haemoglobin 13.5 gm%, total RBC count 4.15 cumm , granulocytes 75% lymphocytes 30% total platelet count 2.5 lacs/cumm, urine test, urea count 16 mg/dl, creatinine count 0.66 mg/dl. HB watch normal but urine protein was increased. Doctor diagnose a case of renal artery stenosis with flash pulmonary oedema.[2]

DIAGNOSTIC EVALUATION:-

Diagnostic Challenging:- no any challenges during Diagnostic evaluation.

Diagnosis:- After physical examination and investigation doctor diagnose a case of Renal artery stenosis with flash pulmonary oedema.

Therapeutic Intervention:- Medical management was provides to the patient tab. Lisinopril 80 MG Once daily tab. Metoprolol 100 mg twice daily, Tab. hydrochlorothiazide 25 mg of one daily to. Treat his hypertensions. Inj. Emset 4 mg if necessary in emergency. Inj. Ceftriaxone 14ml twice a daily. He was took all treatment and outcomes was good his sign and symptoms Was reduce he was able to him own activity no any changes in therapeutic Intervention[3]

Nursing Perspectives :- IV fluid was provided to maintain the fluid And electrolyte monitor heart rate and vital signs per hourly.

Follow up and Outcomes :-

Clinical and patient assessment outcomes:- Patient condition was improved.

Important follow up Diagnostic and other test result :-

To preventing of disease and trying to reserve any sign and symptoms. That have appeared because they reduce breathlessness Doctor advice Follow up after one month and advise blood investigation to know the Further disease Progression.

INTERVENTION ADHERENCE AND TOLERABILITY :- Patient to call prescribe medication regularly he also follow up dietician. But he was refused to take medication.

Advised regular exercise. Dietician was advise consuming less sodium Content food and getting adequate sleep his intervention adherence was satisfactory.

DISCUSSION :

With acute pulmonary venous congestion, flash pulmonary edema usually develops suddenly and disappears quickly This is the first report of FPE in a heart transplant recipient that we are aware of The FPE syndrome is most commonly linked with unilateral or bilateral obstructive renal atherosclerosis, which results in recurring episodes of acute pulmonary edema and severe systemic hypertension. The syndrome is characterised by the fast development of pulmonary edema , which frequently occurs at night.

The previously mentioned nocturnal predominance of FPE The nocturnal preponderance of FPE may be explained by the fact that a drop in blood pressure during the night may diminish renal perfusion and promote renin secretion in the presence of renal artery stenosis. [4,5]

The therapy of choice for FPE is renal artery revascularization (percutaneous balloon angioplasty or surgical revascularization) . In this patient, substantial and diffuse renal artery lesions made balloon

angioplasty impossible, and the rapid and severe renal impairment necessitated emergent surgical revascularization. Related studies were reported [6-12].

In summary, in this unusual case of FPE in a heart transplant recipient, Revascularization of the renal arteries improved renal function and blood pressure while also alleviating acute recurrent pulmonary edema. However, in such circumstances, decompensated myocardial ischemia or heart failure (or both) must be ruled out first, and definitive retrospective confirmation following adequate renal artery perfusion must be awaited.[5]

CONCLUSION:

The patient was admitted to with chief complaint of chest pain and breathlessness, headache , fever , cough. After all investigation patient was diagnosed with the case of renal artery stenosis in our case stresses need for good clinical assessment would nursery care by trained nurses and the use of effective forest studies is compulsory to secure patient from such a vital health condition.

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