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Original Research Paper

Need for a safety check?- Case series of Three Patients

Medical Science

KEYWORDS : potentially malignant disorder (PMD), areca nut, fibrous bands

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ABSTRACT

Introduction- *Acute interstitial nephritis is a leading cause of acute kidney injury. Most common etiologies for AIN are medicines such as Antibiotics and Nonsteroidal anti inflammatory drugs. Chinese herb (Aristocholic Acid) is a well known cause of AIN1'2'3. There are no published case reports of Indian indigenous drugs.*

Method- *We are reporting cases series of three patients.*

Result- *Three patients presented with Nonoliguric AKI.*

First case resolved with short course of steroids,whereas second case resolved spontaneously. The third patient showed partial improvement but developed sepsis and expired.

Consulsion -*Indigenous drugs are routinely prescribed and taken, however very few cases have been published as most of the time these are unidentified and unreported. So there is an urgent need to check the safety of these indigenous drugs.*

INTRODUCTION

Indigenous drugs are commonly prescribed by practitioners of alternative medicine (Ayurvedic, Unani or Siddha etc.) And by quacks and unqualified practitioners. They are taken by a large population in India considering it to be safe with no side effects. Chinese herbs (Aristocholic Acid) have been well documented in causing interstitial nephritis. However there is no similar report with Indian indigenous drugs. There have been concerns about indigenous drugs causing acute interstitial nephritis, however there are no case reports in India, the reason may be most of them going undiagnosed or the nature of content not known.Here we report three cases of biopsy proven acute interstitial nephritis in patients taking a concoction of indigenous drugs.

Case 1-

Seventy year old known diabetic of 20 years, non hypertensive male with no past history of nephropathy (base line Sr creatinine 1.2 mg/dl) presented with nonspecific weakness and decreased appetite with normal urine output. He had history of intake of indigenous drugs for one week for generalized weakness. He was evaluated and found to have raised serum creatinine (2.78 mg/dl). He was further evaluated and other etiologies were excluded. There was no history of use of NSAIDS or Antibiotics, No bony aches and pains, no history suggestive of systemic vasculitis, ANA, ANCA , Anti-GBM were negative, no diabetic retinopathy). Renal biopsy was done in view of unexplained renal failure which revealed acute interstitial nephritis. In view of progressive renal dysfunction (Sr creatinine 6.27 mg/dl) he was treated with intravenous Methyl- Prednisolone (500 mg/day for three days) followed by oral Prednisolone tapered over two weeks. His renal functions improved gradually with Sr. creatinine 1.12 mg/dl at 8 weeks.

Case 2-

Fifty years old non diabetic, non- hypertensive male with no significant past illness presented with history of generalized weakness with decreased appetite following intake of indigenous drugs (contents were namely harod (chebulc myrobalan) , badi har (terminalia chebula), vahera (termenlia belerica), moran fali , pay khumma, pay virang, nageri ashmat, heeing, kala namak, soda.) for one week for weight reduction. On evaluation his peak Sr. creatinine was 2.7 mg/dl with normal urinary examination, normal sized kidneys with altered corticomedullary differentiation. All other possibilities were ruled out by taking detailed history and serological evaluation. Renal biopsy was done which revealed acute interstitial nephritis with no chronicity. Supportive treatment was given with recovery of renal functions with Sr creatinine 0.8 mg/dl after 4 weeks.

CASE 3

An 80yr old female a known hypertensive, non diabetic admitted with generalized weakness and loss of appetite last 2 weeks. She has history of Ayurvedic medicine intake last 3 weeks for joint pain. No history of NSAIDS or Antibiotic intake, rash, oliguria, swelling or loose stools. Her investigation revealed Hb-6.0, TLC-2.0, PLT- 64, UREA- 65 , S.Creatinine-9.6,Na -133 and K-5.3. Urine examination revealed- protein 1+, WBC- 4-5, RBC- 2-3. Patient was initiated on hemodialysis. Further investigations revealed normocytic normchromic anemia on peripheral smear. USG KUB revealed bilateral normal size kidneys with mild increased echogenecity (Right kidney- 9.5, Left kidney- 9.6). Patient underwent kidney biopsy which showed Acute Interstitial nephritis.She was given pulses of steroids (Methyprednisolone 500mg) for 3 days followed by oral prednisolone 60 mg once daily tapered over 4 weeks. She responded to treatment and her renal functions improved (S.cr - 4.2mg/dl, Urea- 50mg/dl) after 2 weeks.

She was re-admitted after 4 weeks with seizures and altered sensorium. Her investigations revealed Hb- 10.4, TLC- 18.9 and Plt - 107. Urea- 89, S.cr- 7.2, Ca- 8.0 , Na-131 and K - 4.34. NCCT Head revealed External capsule infarct. Unfortunately after long stay in ICU she expired.

Serum creatinine	Baseline	Peak	Improved	Biopsy
Case 1	1.2	6.27	1.1	AIN
Case 2	3.9	3.9	0.7	AIN

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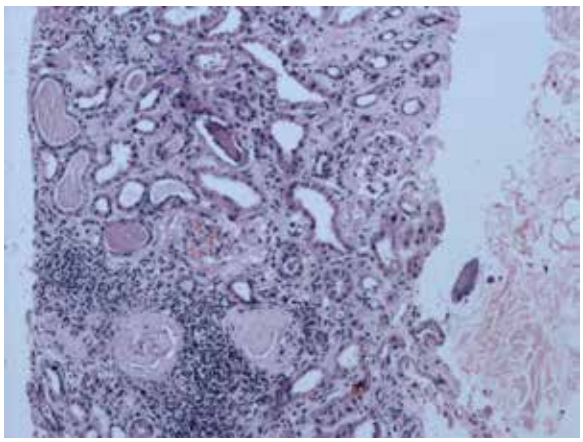
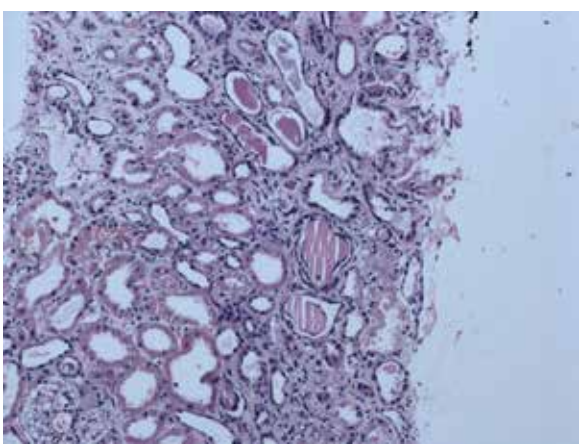
Case 3	9.6	9.6	4.2	AIN



ACUTE INTERSTITIAL NEPHRITIS



Discussion-

Acute interstitial nephritis is a common cause of acute kidney injury and accounts for 7-15% cases of AKI .The most common etiology of AIN is drug induced, which is thought to underlie 60-70% of cases.

The mechanism by which exogenous compounds viz indigenous drugs cause injury depends on the anatomical, physiological and biochemical features attributable to the kidney. (1) They include large blood flow, high endothelial surface area, high metabolic activity, active uptake by tubular cells and medullary interstitial concentration, presence of a variety of xenobiotic transporters and metabolizing enzymes and concentration of solutes during urine production.

Inall these 3 cases, after excluding all other causes of AIN the culprit appeared indigenous medicines which were taken by the patient for weakness in first case and for weight reduction in second case. After stoppage of the drugs they were regularly followed. Their renal function gradually recovered.

Various indigenous agents are known to be toxic. They can be classified into, 1.Agents which are directly nephrotoxic, 2.Agents causing electrolyte abnormalities by action upon the kidney,3. Drugs predisposing to stone formation (oxalate stones), 4.Herbs acting like diuretics,5. Herbal drugs mixed with heavy metals or other drugs, 6.Agents interacting with the transplant medication. Chinese herbs taken for slimming regimen have well been reported to cause acute interstitial fibrosis, but studies in India are lacking due to varied prescriptions.

A review of literature reveals no case reports of ayurvedic drugs causing acute interstitial nephritis. This is perhaps because most of them go unnoticed , actual composition unknown by the patient, lack of standard protocol for purity testing. However in one of our patients, we were fortunate enough to decipher the offending agents. The science of herbs exists in India since time immemorial. The name of Rishi Dhanvantri is enshrined in the mythology and there is mention of turmeric, tulsi or tamra application on wound injuries .

Although government of India has formulated guidelines in the field of complementary and alternative medicine, still large sections of medicines are being prescribed by the quacks or incompetent people.

So are indigenous drugs safer than other branches of medicine needs to be revisited.

CONCLUSION-

Indigenous drugs are routinely prescribed and taken, however very few cases have been published as most of the time these are unidentified and unreported. So there is an urgent need to check the safety of these indigenous drugs.

Reference

1. Nand N ,Aggarwal HK, Jai D , Sharma M. Indigeneous drug induced nephropathy. In sahay BK (ed). Medicine update 2006; vol 16, 458-462
2. CS Yang, CH Lin, SH Chang. Rapidly progressive fibrosing interstitial nephritis associated with Chinese herbs .american journal of kidney 2006-elseiver
3. V jha Herbal medicines and chronic kidney disease – nephrology 2010 wiley