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A STUDY TO EXPLORE THE EFFICACY OF DIETARY RESTRICTIONS ALONG WITH HOMOEOPATHIC MANAGEMENT OF UROLITHIASIS IN SEMI-URBAN AREAS

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Abstract: Urolithiasis is commonest problem which has been engaged by many practitioners during last 3 decades and which has to be looked into and many think that diet is the most common cause leading to precipitation of stone. By our study we want to prove how far diet play a role in causing urolithiasis along, as homoeopathy is well proved science and there is enough proof to show that and again we are proving that in our project.

Index Terms: Renal stone, Homoeopathic Medicine, Diet, Calculi, colic

INTRODUCTION

Urolithiasis refers to the presence of calculi anywhere along the course of the urinary tracts. The term Urolithiasis may be interchangeably used as Nephrolithiasis and renal/kidney stones. Urolithiasis may be of uric acid and urate calculi, oxalate stone, cysteine calculus, phosphate calculus¹. Usually it is the solid constituents of urine such as calcium oxalate (75%), uric acid (8%) and Calcium phosphate (15%) which form stones but occasionally products of bacterial infection can also form stones which are soft stone also called matrix stones. Alteration of physical & chemical properties of urine are the most important factors for initiation of stone formation, they are also formed due to genetic, environmental, high urine calcium levels; obesity and not drinking enough fluids. It is one of the most common disorder of urinary tract.

Calculi is associated with systemic diseases like Type 2 Diabetes Mellitus, coronary artery disease². Many environmental and metabolic disturbances form renal stones. A defect in acid excretion or bicarbonate reabsorption, metabolic acidosis which can lead to metabolisation of calcium from bones causing hypercaluria which is most common metabolic abnormality in urolithiasis. Peak incidence among the age group of 30 ~ 50 years with child and old people being less effected. More prevalence among South Americans, tropical regions and North Indians (Amritsar, Delhi, U.P). With low incidence in Maharashtra, A.P, T.N. Common among men than women (with a ratio of 2:1)⁴, due to effect of oestrogen which causes much absorption of calcium in circulation into bones, where men with high levels of Androgen further causes decrease in Vit-B levels which leads to intestinal absorption of calcium causing hypercaluria.

Malnutrition & obesity are associated with increased risk Urolithiasis¹. Modern lifestyle, dietary habits and obesity emerge to be the promoters of idiopathic stone disease. Modern diets containing a lot of animal protein, refined carbohydrate & salts act on metabolism like an acid concentration. To overcome this, there should be supplement of potash and alkali. Decreased urinary pH may potentiate to form uric acid lithiasis. Carrots which are rich Vit - A taking its juice thrice a day can help in expulsion of the stone. Alcohol is said to predispose to renal calculi hence should be avoided. Avoid taking lime along with beta leaf. Avoid drinking water in wells of villages which are treated with lime. Taking orange juice every day. Taking plenty of water daily. Food containing more of calcium and phosphorus should not be taken. Avoid spinach (palak), fenugreek leaf (menthi), tomato, brinjal, having more seeds, etc., Non-Vegetarian food should be totally stopped. Foods containing oxalates should be avoided. NO liquor, No tobacco chewing and no smoking⁴ RISK FACTORS WITHOUT PROPER TREATMENT MAY LEAD TO CHRONIC KIDNEY DISEASE (CKD) - 60%, END STAGE RENAL DISEASE (ESRD) - 40% IF IT IS ASSOCIATED WITH NEPHROCALCINOSIS⁵

AIMS AND OBJECTIVES: To prove how far dietary restrictions are helpful in treating patients with urolithiasis along with homoeopathic medication

METHODOLOGY: Total of 30 patients are selected of stones size between 3mm to 11mm without any other chronic diseases, these 30 patients are divided into 2 groups (A & B).

- GROUP-A (Patients on Homoeopathic Medication)
- GROUP-B (Patients on Homoeopathic Medication & Dietary restrictions)

CLINICAL FEATURES

SYMPTOMS - it is mainly divided into four groups

1. Quiescent Calculus - A few stones particularly the phosphates stones may lie dormant for quite a long period. Such stones may be discovered accidentally in X-ray performed for some other reason or is first revealed with renal failure and uremia. Sometimes such stones are also discovered due to symptoms of urinary infection.
2. Pain - Pain is the leading symptom of renal calculus in majority of cases. Three types of pain are usually noticed
 - Fixed renal pain - This pain is situated in renal angle and anteriorly in the corresponding hypochondrium. This pain is worse in walking motion and jolting.
 - Ureteric colic - this is a characteristics pain of stone starting from loin extending to groin.
 - Referred pain - this is rarely found and the pain is referred to whole abdomen or to opposite kidney.
3. Hydronephrosis.
4. Haematuria physical signs –
 - Tenderness - This mostly present in renal angle posteriorly. This angle is present between 12th rib and erector spinae muscles.
 - Muscle rigidity
 - Swelling – It is present when there is hydronephrosis or pyonephrosis.

COMMON COMPLICATIONS AND EMERGENCIES:

EFFECTS ON SAME KIDNEY - Obstruction, Infection, Initiate malignancy

EFFECTS ON OPPOSITE KIDNEY - Infection, Calculus anuria⁵

IMPORTANCE OF MANAGEMENT OF UROLITHIASIS ALONG WITH DIETARY RESTRICTIONS

In the developing modern world the usage of junk food, ajinomoto, spices perfumes, drinks etc., this has been unavoidable for the patients. Here dietary restrictions are of utmost importance in removing the maintaining cause for action and curing by the homoeopathic medicine.

HOMOEOPATHIC APPROACH:

As our great master has already said in aphorisms of Organon that

APHORISM 94

While inquiring into the state of chronic diseases, the particular circumstances of the patient with regard to his ordinary occupations, his usual mode of living and diet, his domestic situation, and so forth, must be well considered and scrutinized, to ascertain what there is in them that may tend to produce or to maintain disease, in order that by their removal the recovery may be promoted.

In many cases, making a few lifestyle changes can prevent kidney stones. An overall diet low in salt and very low in animal protein can greatly reduce chances of developing kidney stones.

APHORISM 125

During all the time the experiment lasts the diet must be strictly regulated; it should be as much as possible destitute of spices, of a purely nutritious and simple character, green vegetables, roots and all salads and herb soups (which, even when most carefully prepared, possess some disturbing medicinal qualities) should be avoided. The drinks are to be those usually partaken of, as little stimulating as possible.

Liberal fluid intake – Ingestion of large amount of fluid in the form of beverages such as tender coconut (coconut water), barley water, fruit juices and other soft drinks will help the patient to excrete over 2 litres of urine per day. Dilute urine prevents concentration of solids and the precipitation of crystals of urate and oxalates.

FOOD AND DRINKS TO BE AVOIDED WITH UROLITHIASIS:

Foods to limit, include: high-sodium foods, including processed, packaged foods as well as meals from fast food establishments certain animal proteins, including eggs, fish, pork, and beef. If a person has had calcium oxalate stones, they may wish to restrict their intake of the following foods, which are high oxalate and may increase the risk of recurrence: nuts, peanuts, spinach, wheat bran, rhubarb¹⁴.

Limit High-oxalate foods: Spinach, Grits, baked potatoes with skin, Beets, Cocoa powder, Okra, Bran, cereals and shredded wheat cereals, French fries, Raspberries, Stevia sweeteners, Sweet potatoes¹⁵.

LIMIT SALT INTAKE, Lower your animal protein intake many sources of protein, such as red meat, pork, chicken, poultry, fish, and eggs, increase the amount of uric acid you produce. Eating large amounts of protein also reduces a chemical in urine called citrate. Alternatives to animal protein include quinoa, tofu (bean curd), hummus, chia seeds, and Greek yogurt¹⁶.

Vitamin C - Too much can make your body produce oxalate. Processed foods.

Alcohol - It can make uric acid levels in your blood go up.

Sugary drinks. Tart drinks like lemonade, limeade, and fruit juices are naturally high in citrate that helps keep kidney stones at bay. But hold back on foods and drinks flavoured with sugar or especially high-fructose corn syrup. They can lead to stones.

Cystine Stones:

Too little water, too much acid, Sodium: Once again, try not to overindulge on French fries, canned soups, packaged meats, and other salty foods¹⁸.

Eat fewer high-oxalate foods.

You do not need to cut out other healthy foods that provide some oxalate. In fact, oxalate is practically unavoidable, because most plant foods have some. Often a combination of calcium from foods or beverages with meals and fewer high-oxalate foods is required.

DIETARY ADVICE

Dietary advice as said by our MASTER DR.SAMUEL HAHNEMANN as diet regimen in case of acute diseases in acute diseases APHORISM 259-263

S.NO	FOOD ARTICLE	ACTION
1.	Coconut water	Contains substances which inhibits the initial mineral phase formation and also stimulates demineralization.
2.	Corn silk tea	Rich in tartrates, good inhibitor of stone formation. It also acts as a diuretic.
3.	Barley	Exerts diuretic action, rich in stone inhibitor
4.	Pineapple	Reduces fibrin thus preventing stone formation
5.	Bananas	Rich in vita-B and potassium which breakdown acid in the body thereby preventing stone formation
6.	Almonds	Rich source of magnesium which is stone inhibitor
7.	Lemons	Rich in citrates thus preventing calcium oxalates stone formation
8.	Carrots	Rich in pyrophosphates which are stone inhibitor
9.	Horse grams	Contains inhibitors
10.	Bitter gourd	Contains inhibitors like magnesium, phosphorous.

SELECTION CRITERIA

INCLUSION CRITERIA- Already diagnosed case of urolithiasis & calculi size between 3mm to 11mm are considered in the study.

EXCLUSION CRITERIA-Patients with any other kidney related issues, diabetes and any other chronic diseases are considered during the study.

DURATION OF STUDY - 6 Months

DATA COLLECTION PROCEDURES & INSTRUMENTS USED -The details of the study will be explained to each urolithiasis patients about the outcome of the study & written consent will be taken before enrolling the study

COLLECTION OF DATA - One standard case proforma will be maintained to record the case for this study

PLAN OF STUDY- The study require investigations like USG (Abdomen) & X-RAY (KUB). As the sample size is not more than 30, used patients “paired t-test” as plan of analysis/statistical tool

OBSERVATION AND RESULT

30 cases were taken up for study and the statistical data of observations and results are presented in tabular and pie chart form

STATISTICAL ANALYSIS:

Medication

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	BEFORE MEDICATION & AFTER MEDICATION	15	0.359	0.188

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	BEFORE MEDICATION - AFTER MEDICATION	6.833	2.102	0.543	5.670	7.997	12.593	14	0.000

15 Patients were given only homoeopathic medications (GROUP-A). And results were observed as above, and they were not advised any dietary restrictions.

Diet Restriction

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	BEFORE MEDICATION	7.20	15	1.821	0.470
	AFTER MEDICATION	0.73	15	1.534	0.396

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	BEFORE MEDICATION & AFTER MEDICATION	15	0.276	0.319

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	BEFORE MEDICATION - AFTER MEDICATION	6.467	2.031	0.524	5.342	7.591	12.333	14	0.000

15 Patients are given homoeopathic medication along with dietary restrictions and their data was collected during the follow up. And the result comes with mean value of zero. This signifies rejection of null hypothesis

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	BEFOREMEDICATION	7.50	30	1.907	0.348
	AFTERMEDICATION	0.85	30	1.582	0.289

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	BEFORE MEDICATION & AFTER MEDICATION	30	0.329	0.076

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	BEFORE MEDICATION -AFTER MEDICATION	6.650	2.039	0.372	5.889	7.411	17.863	29	0.000

This is the overall result of the patients with urolithiasis who have been given homoeopathic medication

The null hypothesis (H₀) assumes that the true mean difference (μ_d) is equal to zero.

By the above study the result is zero I.e., rejection of null hypothesis. Rejection of null hypothesis means quite opposite to mean value. By this full efficacy of homoeopathic medication is proved

DISCUSSION - Urolithiasis is commonest problem which has been engaged by many practitioners during last 3 decades and which has to be looked into and many think that diet is the most common cause leading to precipitation of stone. By our study we want to prove how far diet play a role in causing urolithiasis along , as homoeopathy is well proved science and there is enough proof to show that and again we are proving that in our project.

CONCLUSION: As Homoeopathy is a well proved scientific medicine and there is enough proof to show its action, but by this research I came to a conclusion that upon giving only Homoeopathic medication to 15 patients (patients on homoeopathic medication), 11 (patients on homoeopathic medication) patients have completely got cured from urolithiasis, 4 (patients on homoeopathic medication) have symptomatic relief from urolithiasis. 15 (patients on homoeopathic medication and dietary restrictions), 8 patients got cured from urolithiasis, 7 patients have symptomatic relief.

So by this research on A STUDY TO EXPLORE THE EFFICACY OF DIETARY RESTRICTIONS ALONG WITH HOMOEOPATHIC MANAGEMENT OF UROLITHIASIS IN

SEMI-URBAN AREAS, dietary restrictions has shown negligible effect in curing patients with urolithiasis along with homoeopathic medication.

CONFLICT OF INTEREST: NIL

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