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Study the Clinical Effect of Drug under the Guidance and Observation of Physician

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Abstract – Urinary stone malady keeps on possessing a vital place in ordinary urological rehearse. The normal life time danger of stone development has been accounted for in the scope of 5-10 %. A prevalence of men over ladies can be seen with a frequency crest between the fourth and fifth decade of life. Intermittent stone arrangement is a typical piece of the medicinal care of patients with stone illness. Calcium-containing stones, particularly calcium oxalate monohydrate, calcium oxalate dihydrate and fundamental calcium phosphate are the most normally happening ones to a degree of 75-90% took after by magnesium ammonium phosphate (Struvite) to a degree of 10-15%, uric corrosive 3-10% and cystine 0.5-1% (4-6). Urinary stones influence 10-12 % of the populace in industrialized nations. There are just a couple of geological territories in which stone sickness is uncommon e.g. Germany and in the waterfront regions.

Keywords: Urinary Stone, Indian Drug, Medicinal Plants

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INTRODUCTION

Uric corrosive lithiasis has for some time been related with gout, hyperuricemia and radiolucency (Gutman, Yu 1968)

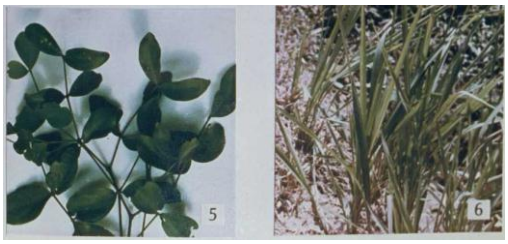
- However uric corrosive stones can be shaped without gouty joint inflammation, hyperuricemia any hyperuricosuria (Pak etal 1986).

The primary determinant of uric corrosive crystallization is the supersaturation of pee as for undissociated uric corrosive (Finlayson and Smith 1974). There is no known inhibitor or uric corrosive crystallization.

The urinary immersion of undissociated uric corrosive is subject to pH and uric corrosive fixation. The exchange of pH and the dissolvability attributes of uric corrosive and urate salts decide the likelihood of stone development (Figure v). At a urinary pH of under 5.5 the low solvency of uric corrosive leaves an overabundance of undissociated uric corrosive to cause uric corrosive lithiasis. At pH of higher than 5.5 monosodium urate is especially inclined to shape uric corrosive precious stones on account of its low dissolvability and due to the copious sodium substance of pee (Pak etal 1977). Potassium urate is more improbable because of its more noteworthy dissolvability and lower urinary substance.

PLATE II

1. Azhinjil
2. Karimkurinji
3. Ama
4. Kus ha
5. Ithil
6. Darb ha



Alanguim salviifolium Linn. (Alangiaceae)

(Azhinjil - Plate II, Figure-1).

A little deciduous tree, bush or straggler, in the drier parts of India and Ceylon and developing energetically in the backwoods of south India and Burma. The root bark is anthelmintic and laxative. It is helpful in fevers and skin illnesses, and is by and large regulated as powder. Chopra and Chowhan (Indian J. med. Res. 1934, 21, 507) have detached an undefined alkaloid alangine (0.8%; m.p. 80-82') from the bark. In little dosages, the alkaloid brings down circulatory strain briefly, discourages the heart and produces unpredictable breath. It additionally increments peristaltic development of the digestion tracts.

Strobilanthes ciliatus Nees (Acanthaceae)

Syn: Strobilanthes heyneanus

(Karimkurinji - Plate II, Figure-2)

A little bush; stems and branches terete or subquadrangular, frequently fimbriate at the hubs. Leaves 10- 18 by 2.50 - 5.00 cm., lanceolate, taper, lineolate (thickly so above), glabrous or almost in this way, serrate, base lessened into the petiole; fundamental nerves 6-7 sets; petioles 1.3 - 3.8 cm. long, in some cases cloud. Blooms in axillary thin glabrous spikes 2.5 - 7.5 cm. long; peduncles long, slim, glabrous, jointed and bracteate underneath the center and there deflexed; bracts 6 mm long, applaud, subacute, glabrous, lineolate, the edges regularly unclearly toothed; bracteoles 4 mm long shorter, than the calyx straight sub insensitive, mucronulate, lineolate, glabrous or almost so; tube around 1.25 mm long; fragments subequal, direct, subobtuse. Corolla white, 13.00 - 16.00 mm long; tube limit in the lower part, campanualately swollen in the upper half; flaps 3 mm long, elongated, adjusted at the peak, spotted with lilac at the base. Stamens 4, exserted; fibers of the more extended stamens hairy; anthers purple. Ovary glabrous; style glabrous. Cases not seen. The bark is utilized as an emollient, the blossom as a vulnerary.

Saccharum sara Roxb. (Gramineae)

(Ama - Plate II, Figure - 3)

Indigenous to North-West India. It is refrigerant and Spanish fly. On the off chance that utilized every day it drags out life span. It is helpful in loose bowels, strangury, bubbles, eye illness and so forth.

Desmostachya bipinnata Stapf. (Gramineae)

(Kusha - Plate II, Figure - 4)

Lasting, tall, spread from the base; rootstock strong, crawling; stolons exceptionally forceful, secured with sparkling sheaths; stems 30.00 -90.00 cm high, tufted, smooth, erect, forceful. Leaves many, the basal fascicled, coming to now and then 50cm long and 1 cm wide at the base, unbending, sharpen, with filiform tips and hispid edges, sheaths glabrous; ligule a bushy line. Panicle 15.00 - 45.00 by 1.30 - 3.80 cm, strict, erect, barely pyramidal or columnar, regularly interfered; rhachis puberulous; branches some, short, hardly achieving 2.5 cm since quite a while ago, swarmed, dressed from the base with sessile imbricating spikelets. Spikelets sessile, secund, 2-seriate and swarmed, deflexed, pale dark colored, rather sparkling, 13 mm long, up to 30-bloomed; rhachilla intense. Involucral glumes exceptionally unequal; bring down 0.5 mm long; upper 1.6 mm long, unfeeling; botanical glumes 1.60 - 2.0 mm long, praise, intense, coiraceous; palea shorter than its glume, subcoriaceous, with minutely scabrid keels. Stamens 3; anthers 0.8 mm long. Frain 0.5 - 0.6 mm long, sideways ovoid, along the side compacted, unclearly 3-gonous. Disseminated all through India in hot and dry spots - Nubia, Egypt and Syria.

Loranthus elasticus Desr. (Loranthaceae)

(Ithil - Plate II, Figure - 5)

Much-stretched, glabrous; branches dichotomous, pendulous, terete, swollen at the joints, the youthful ones green. Leaves inverse, sessile or almost along these lines, thickly coriaceous. 3.80 - 10.00 by 2.00 - 4.50 cm, applaud elliptic, suborbicular or elongated lanceolate, heartless, dim green and smooth above, glaucous underneath, base generally intense, the exceptionally youthful leaves regularly red; nerves 3 - 5, darken. Blooms sessile, fascicled at the nodes; bracts red, broadly ovate around 1.2 mm long. Calyx red, 3 mm long tube glabose; appendage cylindric, whole, around 1.00 - 2.00 mm long; corolla 2.5 cm long. The lower part in bud obtuesly 5-calculated, the upper part cylindric; tube split, greenish-white with brilliant green veins; flaps 5, spirally looped, barely straight, longer than the tube. Stamens 5; filaments red; anthers 3 mm long, narrow. Style very long, red, shame fusiform.

Berry sub globose or ovoid, sessile, pink, 13 mm long; egg whites white, 5 toothed at the summit; developing life club formed, the radicle-end secured with minute handles. The leaves are utilized to check premature birth; additionally in vesical calculi and kidney affections.

Imperata cylindrica Beauv. (Gramineae).

Syn: Imperata arundinacea Cyr.

(Darbha - Plate II, Figure - 6).

An exceptionally factor, tufted, perpetual grass with rhizomatic underground parts; rhizomes white, fairly succulent, stretched, broadly crawling, flaky; culms erect, extending from thin, filiform, overshadow frames 7.50 - 10.0 cm high to hefty, vigorous structures around 2.8 m. tall and 8 mm in diam; leaves variable, short to 1.5 m long, erect, straight to direct lanceolate, level; panicle silver-white, thick, cushy, plush, barrel shaped 2.50 - 22.59 cm or all the more (once in a while 75 cm) long; grains (caryopsis) little, elliptic to oval darker, light, free.

Imperata cylindrica is disseminated all through the tropical and calm districts of the Old World and in parts of mild South America. It is regular in tropical Africa, southern Europe and eastwards to Turkestan, Afghanistan, India, Ceylon, Malaya, Java, China, Japan and Australia. It has been brought into U.S.A. what's more, is found in Florida. In India it is discovered thoughout the more sultry parts, both in fields and slopes, rising up to 2,300 m in the Himalayas.

MATERIAL AND METHODS

Crystal Growth

Crystal development in gels turned out to be more well-known as it was discovered perfect for developing crystals of substances marginally solvent in water and which cannot be grown by the traditional techniques for dissolve or vapor. Abdul Khader and Ittyachen (1980) have presented another gel system for the in vitro development of lead chloride in silica gel. This strategy has turned out to be prominent now in light of the fact that the crystallization happens immediately and this can be controlled by allowing one of the reactants impregnated in the gel to diffuse into the gel and respond with the other continuously. It is a procedure of dissemination and concoction response occurring all the while. The material transport is taking place basically by diffusion (Roop Kumar etal, 1987). The gel medium gives a three dimensional structure permitting .the reagents to diffuse at a controlled rate. Control of nucleation is accomplished by altering the pore measure circulation which is subject to the thickness of the gel. Response occurring in the silica gel arrancrystalent:-

On dissolving sodium metasilicate in water, monosilicic corrosive is shaped.

Na2Si03+3H20 ---------->H4Si04+2Na0H

Polymerisation of monosilicic corrosive with freedom of water happens over and over until the point that a three dimensional system of Si-0 connect is set up in silica. In vitro Oxalate crystal development set up is typically arranged either by twofold dissemination strategy utilizing U tubes or by single dispersion method utilizing Hane's tubes. On account of more prominent comfort, single dispersion technique was utilized for the investigations.

Impact of Veeratharadi Kashayam and its fixings on in vitro oxalate crystal development

Veeratharadi Kashayam Preparation and Administration of Kashayam

Traditional Method: Prepared as per Veeratharadi yoga portrayed in Ashtangahridaya. Sutrastana. Section 15. Twenty one restorative plants were utilized for the readiness of this Kashayam. The taxonomical grouping of the plants utilized for the planning of the Kashayam is given in table- I. Three gram each of these fixings were taken, washed altogether, cut into little pieces, roots and bark were pummeled and overflowed with 1200 mL of water. At the point when the volume was diminished to 300 mL, 150 mL of the unmistakable arrancrystalent was expelled from this, its volume was additionally come down to 50 mL and given to the patient as a solitary dosage at night. The staying 150 mL was left overnight all things considered in the compartment alongside the remaining prescriptions. This was sifted in the following day morning, bubbled lessened the volume to 50 mL and directed as the morning measurement. The treatment would proceed for a time of 3 months. Pee routine for examination, biochemical investigation of 24 hour pee and serum were played out like clockwork.

The Kashayam was accessible locally likewise from the makers of ayurvedic drugs. Kashayam bought from M/s.Sri Dhanwantari Matam, Thiruvananthapuram was utilized for trial purposes. Being more thought 10 mL of this planning weakened with 40 mL of bubbled and cooled water would be equivalent to 50 mL of crisply arranged Kashayam.

Ingredients

Readiness of Water Extract; Two hundred gram of the proper piece of the restorative plant was taken, cleaned, cut into little pieces and overflowed with 2 liters of water. At the point when the volume was around 300 mL, it was separated and the leftover plant parcels were evacuated. The filtrate was again bubbled and the arrancrystalent was concentrated to the base conceivable volume in low warmth. This was exchanged to a perfect container and permitted to cement by keeping in a hatchery at 37° C. Weight

of the item acquired was noted and kept in the fridge in a firmly shut clean compartment. Every single other part were removed in comparative way.

Infrared Spectroscopy

Infrared spectroscopy has been utilized as a simple and precise technique for the ID of examples by deciding atomic structure. Infrared investigation is more particular and reproducible than expected wet substance techniques. Each atom has a trademark assimilation range in infrared locale relying upon the conditions and structure of the substance bond and this is alluded to as the unique mark of the particle. IR spectroscopy has been effectively completed for the quantitative and semi quantitative investigation of urinary calculi. At the point when an example is subjected to IR range, a portion of the frequencies are being consumed by the example while some are transmitted through without being ingested. An IR range is acquired plotting the percent absorbance or percent transmittance against recurrence. Distinguishing proof of the obscure example is finished by contrasting its range and reference spectra as indicated by the method of Hesse and Bach (1982).- Compared to different procedures, just a little amount of the material is required for IR examination. Effortlessness of operation of the IR procedure is an additional preferred standpoint.

METHODOLOGY

The instrument utilized as a part of this examination was an infrared spectrophotometer Perkin Elmer, Model 882, which could gauge in the wave length locale 4000-200 CM~1, Potassium bromide (KBr) which does not have any retention in the unearthly district was utilized as the inactive bearer. 1 mg of the powdered material for investigation was homogenized with 200 mg of KBr. This blend was squeezed into a pellet under vacuum to avoid dampness, utilizing an ordinary squeezing machine and nourished into the IR spectroscope for examination. The assessment of the IR range was finished by examination with reference spectra.

Filtering Electron Microscopy (SEM)

This is utilized for the ID of microstructural qualities of strong questions and is more favorable because of the high determination and three¬dimensional appearance of the protest. The more prominent profundity of center of SEM empowers us to have more data about the example. Profundity of the field is 300-500 times that of a common optical magnifying instrument. At the point when the electron shaft hits the surface of the example, optional electrons, back scattered electrons, X-beams, transmitted electrons, wood screw electrons, cathode radiance electrons and so forth are delivered.

The picture of the optional electrons is being used for surface examination. Utilizing an electron magnifying instrument the surface geography or cut segments of the calculi and moment auxiliary points of interest of the precious stones developed in vitro can be examined and shot. Such an examination is helpful in deciding mineral stages, incorporations and crystalline organization. By methods for SEM examination Hesse etal (1981) have shown trademark whewellite and calcium phosphate gems in urinary stones.

All examples of non-directing materials for SEM ponder must be given a thin covering of leading material. Normally gold-palladium (60:40) metal covering, is given by the mainstream strategy for sputtering.

Approach

Dry example is required for SEM investigation. The example mounting metal stud was cleaned, and little particles of the example to be investigated were stuck to the stud utilizing silver glue, a conductive cement. The non conductive examples were made conductive by sputtering them with gold to an estimated thickness of 100 A°. A gold sputtering unit was utilized for the reason.

A JEOL JSM 35 C examining electron magnifying instrument was utilized for the examination. The gold sputtered tests were put in the vacuum assembly of the instrument and saw. The signs discharged from the surface of the example because of the hitting of the electron pillar, were taken up by the indicator, increased and grabbed by the cathode beam container of the show screen on which the picture is gotten. Significant fields were captured. Perusing of photos was done in light of the consequences of the subjective and quantitative estimations, IR spectroscopy and by contrasting and reference photos.

Sample collection

About 200 patients with urinary stone complaints have attended the surgical department of the rajasthan medical college. Out of these, willing patients was be selected for the study. These patients was interview as per standard proforma, details recorded and with the help of surgeons using patient's x-ray, ultrasonograph and other relevant details, they were classified into 3 groups.

Group

1 ; Stone patients

2: Crystalluric patients

3: Colic patients

Fifty-four patients incorporated into the examination were partitioned into the over three gatherings. Stone

gathering comprised of 31 patients (57%), crystalluric bunch 13 patients (24%) and colic aggregate 10 patients (19%). Wellbeing volunteers age and sex coordinated without any objections of urolithiasis have been incorporated and taken as control gathering.

Organization of Drug

According to bearings of the Physician (Ayurveda) these patients after preparatory assessment were informed to take 10 mL concerning the focus type of the medication weakened to 50 mL with bubbled and cooled water twice day by day for a time of three months. Dietetic exhortation in light of the pretreatment biochemical esteems was likewise given to patients and they were approached to want survey following 3 months.

The patients going to the surgery office for Stone objections amid a time of one year are incorporated and the primary survey comes about are examined.

Investigations

Random midstream urine of each patients was collected for routine analysis including microscopy. Ten millilitres blood was collected by venous puncture, serum separated and analysed for biochemical parameters. 24 h urine was collected in clean polythene containers with 2 mL of thymol in isopropyl alcohol (50%w/v) as preservative. After noting the total volume the urine was mixed thoroughly and approximately 50 mL was removed to a clean bottle for biochemical examination**.**

Methodology for Biochemical Analysis

- Antacid Phosphatase (ALP)
- Alanine Aminotransferase (ALT)
- Aspartate Aminotransferase (AST)
- Cholesterol
- Creatinine
- Lactate Dehydrogenase
- Uric Acid
- Calcium
- Phosphorus
- Add up to Protein
- Magnesium
- Oxalate
- Chemicals

RESULLTS

demonstrates the biochemical examination of 24 hour urine from stone patients previously and after the organization of Veeratharadi Kashayam. Calcium level was somewhat higher than in charge in the gathering preceding treatment. Following 3 months of Kashayam organization the pee calcium level was brought down marginally. demonstrates the urinary constituents of crystalluric patients. Calcium demonstrated a similar example in this gathering likewise however the expansion in urinary calcium was not exactly in stone patients. Colic patients displayed a somewhat extraordinary example Both when the organization of Kashayam the calcium level expanded in pee.

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