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Phytochemical Analysis of Ocimum Canum Mother Tincture and Evaluation of its Efficacy on Nephrolithiasis Patients

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ABSTRACT

Objectives: This prospective and experimental study was planned to evaluate the efficacy of homoeopathic Mother tincture Ocimum canum on nephrolithiasis patient and explored to phytoconstituent of ocimum canum mother tincture.

MATERIAL AND METHODS: To explore the phytoconstituent of Ocimum canum mother tincture and evaluate utility of ocimum canum mother tincture on Thirty cases of Renal Calculi were randomly chosen and studied.

RESULT: This study done in two phase firstly practical to revealed the phytochemical of Ocimum canum mother tincture such as alkaloid, flavonoid, carbohydrate, protein, tannin, terpenoid, and saponin, phytoconstituent is present, HRLCMS reveal the approx hundred compound and second phase clinical triol on 30 cases of nephrolithiasis patient ,out of 30 cases,7(30%) was cure,18 cases(60%) was remarkably improved,4cases(14%) was moderately improved and 1 case (3%) was no change.

CONCLUSION: After practical performance found that alkaloid, flavonoid, terpenoid, carbohydrate, protein and amino acid, tannin, saponin & HR-LCMS analysis specifies that the methanol extract of Ocimum canum mother tincture contains various valuable secondary compounds which have various medicinal properties that can be useful for the treatment of various diseases. The study reveals the vital role of phytochemical which are released in the form of secondary compounds in controlling the fungal plant diseases without effecting the environment helping in reducing the soil salinity and increase the fertility.

From this study it is evident that majority of cases of Renal calculi Can be effectively relived by homoeopathic mother tincture treatment. Homoeopathic remedies to begin with reduce the frequency of acute exacerbations, reduce the intensity of the symptoms, and reduce the relapse and chances of recurrence and their by remove the stones. They reduce dependence over other Drugs and also surgery.

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KEYWORDS: *Phytochemical, HRLCMS, Ocimum canum, Nephrolithiasis, NPRS scale etc.*

INTRODUCTION

Phytochemistry, the study of plant chemical, play a vital role in numerous field.

Systematic botany &taxonomy- Phytochemical analysis help in understand the evolutionary relationship among plant species based on share chemical compound. This aids in plant classification & taxonomy.

Ethnobotany- Phytochemistry contributes to identifying bioactive compound in plants used by indigenous communities for medicinal, cultural or other purpose.

Conservation biology- Understanding the chemical composition of plants can aid in conservation effects by identifying rare or endangered species &their unique chemical profiles.

Plant genetic& Metabolism- Phytochemical analysis is crucial for studying plant metabolism & genetic basis of natural product biosynthesis.

Evolutionary science- Phytochemistry provide insights into the co-evolutionary relationship between plant and other organism, such as insect or microbes, based on chemical interaction.

Plant Pathology-Phytochemicals often play roles in plant defense mechanism against pathogens. Understanding these compounds can inform strategies for disease management.

The knowledge of phytochemistry is essential for-

- search and discovery of new drug.
- Identification, classification and Characterization of plant and standardization of herbal drug in the crud form.
- Assessment of the toxicity level of plant.
- Understanding of plant physiology, biosynthetic pathway and metabolomics.
- Study of plant inter and intraspecific chemical variability within plant.
- Biotechnology and genetic engineering for the optimization and synthesis of classic compound.
- Plant pathology and food preservation.
- Development of biofungicides, insecticides, pesticides and herbicides.
- Phytoremediation of toxic substances such as poison and heavy metal.

Function of phytochemical in the living organism such as-

- Antibacterial, antimicrobial, antiviral etc.
- Antioxidants by preventing oxidative damage of important biomolecules such as nucleic acid, protein and fats.
- Stimulation of immune system.
- Modulation of detoxifying enzyme.
- Anti-inflammatory function.
- Phytochemical reduced platelet aggregation.
- Physiological activities such as interfering with the binding of pathogen to cell receptor.

Other function include antimalarial activity, antidiarrheal, antihelminthic, hepatoprotective, antiatherosclerosis, antiallergic, antidiabetic, antimutagenic, wound healing, pain relief, and hypertension.

Phytochemical are also used in the treatment of a sore throat, cough, toothache, ulcer, menstrual bleeding, improvement of sperm count, dysentery, treatment, stomach upset, vertigo and appetite enhancing. Many other functions of phytochemicals exist depending on the plant.

Material and method

For phytochemical study

Preparation of plant extracts

Hot water extraction

5gm of dried powdered plant material was taken in a vessel and mixed with 200ml of distilled water. The mixture was heated on electric plate with continuous stirring at 30º-40ºC for 20minutes. Then the water extract was filtered through filter paper and the filtrate was used for the phytochemical analysis. The water extract was kept in refrigerator when not in use.

Solvent extraction

Crude plant extract was prepared by Soxhlet extraction method. About 20gm of powdered plant material was uniformly packed into a thimble and extracted with 250ml of different solvents separately. Solvents used were methanol, ethanol, and acetone. The process of extraction continues for over night (24 hrs) or till the solvent in siphon tube of an extractor become colorless. After that the extract was taken in a beaker and kept on hot plate and heated at 30-40ºC till all the solvent got evaporated. Dried extract was kept in refrigerator at 4ºC for their prospective use in phytochemical analysis.

Preparation of plant filtrate

5gm of dried finely powdered plant material was taken in a conical flask and adequet quantity of ethanol or methanol was added. The mixture was kept 30 minutes for extraction after that Filtered the ethanolic solution by filter paper then solution taken in China dish & kept the China dish over boiling water bath, to evaporate the solvent and dry the sample after completely evaporation of solvent then added sufficient quantity of dilute HCL, after dissolving this dry residue filtered the solution with filter paper and collected liquid extract and use in alkaloid test.

1. Test for steroids-

Salkowski reaction-To the sample, chloroform was added followed by concentrated sulphuric acid along the side of test tube. A red -brown colour indicate the presence of steroid.

2. Test for alkaloids-

The sample was dissolved separately in 1% of HCl. 1-2 ml of solution was taken and few drops of the following reagent were added to perform the test-

Dragendroff's test

One ml of dragendroff reagent was added to the sample, formation of reddish -brown colour precipited indicate the presence of alkaloids.

Mayer's test
One ml of Mayer reagent added to the sample then formation of cream colour precipited indicate the presence of alkaloid.

Hagar's test
One ml of Hagar reagent added to the sample then formation of yellow colour precipited indicate the presence of alkaloid.

Wagner' test
One ml of wagner reagent added to the sample then formation of reddish brown colour precipited indicate the presence of alkaloid.

3. Test for Tannin-
Ferrric chloride test
The sample was treated with dilute ferric chloride solution (5%). The appearance blue and green colors indicate the presence of hydrolysed and condensed tannin.

Lead acetate test
The small quantity of sample dissolved in distilled water and10% lead acetate solution was added to it.

A white or snowy precipitate indicate the presence of tannin.

4. Test for flavonoid Alkaline reagent test
To the sample, a few drops of sodium hydroxide solution were added. Formation of intense yellow colour which turn colourless after addition of few drops of dilute hydrochloric acid indicate the presence of flavonoid.

Shinoda test-
The sample was dissolved in alcohol. To that, a piece of magnesium was added followed by concentrated hydrochloric acid dropwise and subsequently heated. The appearance of a crimson red colour indicate the presence of flavonoid.

5. Test for carbohydrate Molisch's test
The sample to be tested is mixed with a small amount of Molisch reagent in a test tube & mixed well. A small amount of concentrated sulphuric acid was slowly added down the sides of the sloping test tube. The appearance of a purple ring at the junction indicate the presence of carbohydrate.

Fehling test (reducing sugar)
The sample solution is mixed with a small amount of fehling solution A&B and heated. The appearance of a crimson colour precipitate indicate the presence of reducing sugar.

6. Test for saponin glycoside-Froth test
A small quantity of the sample was diluted with 20 ml of distilled water and shaken.

For clinical study-
Source of data- OPD and IPD of government homoeopathic medical college and hospital, peripheral OPD and camps organized by GHMC.

Number of cases-30

Case selection- on the basis of inclusion and exclusion criteria.

Inclusion criteria-
- Diagnosed case of kidney stone.
- Stone size between 2mm to 10mm.
- Patient of all age group, both sexes, irrespective of their socioeconomic will be consider.
- Patient who are willing to continue to treatment and follow up according to protocol.

Exclusion criteria-
- Stone size more than 10mm.
- Case with need of surgical intervention.
- Case with advanced and irreversible pathological condition.

Dropout criteria-
Case with more than three irregular follow up.

Case taking proforma- as per study

Selection of medicine- Ocimum canum

Procedure-
The Numeric Pain Rating scale

To assess the intensity of pain-

Rating	Description
0	No pain
1-3	Mild pain
4-6	Moderate pain
7-10	Worst severe pain

Observation and result-

S No.	test	observation	inference
1.	Salkowaski reaction	Red colour	Steroid present
2.	Dragondroff test	Yellow colour	Alkaloid absent
3.	Mayer test	Creamy colour ppt	Alkaloid present
4.	Wagnor test	Reddish brown ppt	Alkaloid present
5.	Mohlish test	Violet colour at junction	Carbohydrate present
6.	Fehling test	Red colour	Reducing sugar absent
7.	Aquous NaOH test	Yellow colour	Reducing sugar present
8.	Killer killani test	Blue colour	Glycoside absent
9.	Biuret test	Green colour	Protein and amino acid present
10.	Alkalini reagent test	Red cour	Flavonoid present
11.	Shinoda test	Crimson red	Flavonoid present
12.	Pew test	Red colour	Flavonoids absent
13.	Zinc hydrochloride test	Green colour	Flavonoid absent
14.	Ferric chloride test	Green colour	Phenolic absent
15.	Vanilin Hydoxide test	Green colour	Phenolic absent
16.	Brayemer test	Blue green colour	Tannin absent
17.	Copper acetate test	Green colour	Terpenoid present
18.	Foam test	Foam present	Saponin present
19.	Oil test	Spot present	Oil and fatty acid absent

Qualitative Compound Report

Data File	Ocimum Canum-MT-320_-VE.d	**Sample Name**	Ocimum Canum-MT-320
Sample Type	Sample	**Position**	P1-A2
Instrument Name	QTOF	**User Name**	
Acq Method	metabolite_ESI_-VE_MSMS.m	**Acquired Time**	9/2/2024 3:29:30 AM
IRM Calibration Status	Success	**DA Method**	Default.m
Comment			

Sample Group	**Info.**
Acquisition SW Version	6200 series TOF/6500 series Q-TOF B.05.01 (B5125.3)

Compound Table

Compound Label	RT	Mass	Abund	Name	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula	DB Diff (ppm)	Hits (DB)
Cpd 32: 1-O-[2-(L-Cysteinamido)-2-deoxy-alpha-D-glucopyranosyl]-1D-myo-inositol; C15 H28 N2 O11 S	4.15	444.1357		1-O-[2-(L-Cysteinamido)-2-deoxy-alpha-D-glucopyranosyl]-1D-myo-inositol	C15 H28 N2 O11 S			C15 H28 N2 O11 S	C15 H28 N2 O11 S	12.71	2
Cpd 4: C9 H10 O3	5.903	166.0627	714		C9 H10 O3	166.063	-1.7	C9 H10 O3	C9 H10 O3		
Cpd 24: 2,3-Dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-1-propanone; C10 H12 O5	5.903	212.0682	714	2,3-Dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-1-propanone	C10 H12 O5			C10 H12 O5	C10 H12 O5	1.33	
Cpd 18: 2,3-Dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-1-propanone; C10 H12 O5	5.903	212.0682	714	2,3-Dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-1-propanone	C10 H12 O5			C10 H12 O5	C10 H12 O5	1.33	
Cpd 19: 2,3-Dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-1-propanone; C10 H12 O5	5.903	212.0682	714	2,3-Dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-1-propanone	C10 H12 O5			C10 H12 O5	C10 H12 O5	1.33	
Cpd 33: Esculetin; C9 H6 O4	6.155	178.0279		Esculetin	C9 H6 O4			C9 H6 O4	C9 H6 O4	-7.31	7
Compound 34	6.162										
Cpd 35: Aprepitant; C23 H21 F7 N4 O3	6.231	534.1441		Aprepitant	C23 H21 F7 N4 O3			C23 H21 F7 N4 O3	C23 H21 F7 N4 O3	11.48	10
Cpd 36: Aspirin; C9 H8 O4	6.249	180.0442		Aspirin	C9 H8 O4			C9 H8 O4	C9 H8 O4	-11.03	10
Cpd 29: Syringic acid; C9 H10 O5	6.537	198.0534	344	Syringic acid	C9 H10 O5			C9 H10 O5	C9 H10 O5	-2.76	
Cpd 37: gibberellin A3 O-beta-D-glucoside; C25 H32 O11	6.585	508.199	36614	gibberellin A3 O-beta-D-glucoside	C25 H32 O11			C25 H32 O11	C25 H32 O11	-8.92	4
Cpd 16: Chlorogenic acid; C16 H18 O9	6.604	354.095	2498	Chlorogenic acid	C16 H18 O9			C16 H18 O9	C16 H18 O9	0.1	
Cpd 15: C7 H14 O2	6.788	130.0991	2201		C7 H14 O2	130.0994	-1.97	C7 H14 O2	C7 H14 O2		
Cpd 13: C7 H14 O2	6.788	130.0991	2201		C7 H14 O2	130.0994	-1.97	C7 H14 O2	C7 H14 O2		
Cpd 38: Allivicin; C27 H30 O16	7.31	610.1608		Allivicin	C27 H30 O16			C27 H30 O16	C27 H30 O16	-12.2	10
Cpd 8: C6 H12 O2	7.497	116.0836	1859		C6 H12 O2	116.0837	-1.3	C6 H12 O2	C6 H12 O2		
Cpd 39: Allivicin; C27 H30 O16	7.594	610.1609		Allivicin	C27 H30 O16			C27 H30 O16	C27 H30 O16	-12.28	10
Cpd 40: Myricitrin; C21 H20 O12	7.792	464.1007	91000	Myricitrin	C21 H20 O12			C21 H20 O12	C21 H20 O12	-11.17	10
Cpd 41: Luteolin 7-O-glucuronide; C21 H18 O12	7.852	462.084		Luteolin 7-O-glucuronide	C21 H18 O12			C21 H18 O12	C21 H18 O12	-9.08	6
Cpd 42: Cynaroside; C21 H20 O11	8.263	448.1061	146332	Cynaroside	C21 H20 O11			C21 H20 O11	C21 H20 O11	-12.33	10
Cpd 43: Streptonigrin; C25 H22 N4 O8	8.486	506.1485		Streptonigrin	C25 H22 N4 O8			C25 H22 N4 O8	C25 H22 N4 O8	-9.37	10
Cpd 44: Paederoside; C18 H22 O11 S	8.657	446.092	47052	Paederoside	C18 H22 O11 S			C18 H22 O11 S	C18 H22 O11 S	-8.41	10
Cpd 21: 3-Octen-2-one; C8 H14 O	8.692	126.1045	1210	3-Octen-2-one	C8 H14 O			C8 H14 O	C8 H14 O	-0.02	
Cpd 22: 3-Octen-2-one; C8 H14 O	8.692	126.1045	1210	3-Octen-2-one	C8 H14 O			C8 H14 O	C8 H14 O	-0.02	
Compound 45	8.994										
Cpd 2: xi-Tetrahydro-3-pentyl-2H-pyran-2-one; C10 H18 O2	9.037	170.1307	1210	xi-Tetrahydro-3-pentyl-2H-pyran-2-one	C10 H18 O2			C10 H18 O2	C10 H18 O2	-0.1	
Cpd 11: Linalyl oxide; C10 H18 O2	9.037	170.1307	1210	Linalyl oxide	C10 H18 O2			C10 H18 O2	C10 H18 O2	-0.1	
Cpd 17: xi-Tetrahydro-3-pentyl-2H-pyran-2-one; C10 H18 O2	9.037	170.1307	1210	xi-Tetrahydro-3-pentyl-2H-pyran-2-one	C10 H18 O2			C10 H18 O2	C10 H18 O2	-0.1	
Cpd 23: xi-Tetrahydro-3-pentyl-2H-pyran-2-one; C10 H18 O2	9.037	170.1307	1210	xi-Tetrahydro-3-pentyl-2H-pyran-2-one	C10 H18 O2			C10 H18 O2	C10 H18 O2	-0.1	
Cpd 3: Vanillic acid; C8 H8 O4	9.651	168.0426	886	Vanillic acid	C8 H8 O4			C8 H8 O4	C8 H8 O4	-1.73	
Cpd 46: Kaempferol; C15 H10 O6	10.397	286.0509	152514	Kaempferol	C15 H10 O6			C15 H10 O6	C15 H10 O6	-11.06	10
Cpd 27: C16 H12 O7	10.419	316.0587	1882		C16 H12 O7	316.0583	1.11	C16 H12 O7	C16 H12 O7		
Cpd 25: C16 H12 O7	10.419	316.0587	1882		C16 H12 O7	316.0583	1.11	C16 H12 O7	C16 H12 O7		
Cpd 31: C16 H12 O7	10.419	316.0587	1882		C16 H12 O7	316.0583	1.11	C16 H12 O7	C16 H12 O7		
Cpd 20: Phenylacetic acid; C8 H8 O2	10.686	136.0529	2943	Phenylacetic acid	C8 H8 O2			C8 H8 O2	C8 H8 O2	-3.48	
Cpd 47: Ethyl 3-(methylthio)butanoate; C7	10.712	162.0706		Ethyl 3-(methylthio)butanoate	C7 H14 O2 S			C7 H14 O2 S	C7 H14 O2 S	5.28	10
Cpd 48: N1,N5,N10-Tricoumaroyl spermidine; C34 H37 N3 O6	10.732	583.2737	117655	N1,N5,N10-Tricoumaroyl spermidine	C34 H37 N3 O6			C34 H37 N3 O6	C34 H37 N3 O6	-9.42	3
Cpd 49: N1,N5,N10-Tricoumaroyl spermidine; C34 H37 N3 O6	11.025	583.2733		N1,N5,N10-Tricoumaroyl spermidine	C34 H37 N3 O6			C34 H37 N3 O6	C34 H37 N3 O6	-8.71	3
Cpd 50: Cromolyn; C23 H16 O11	11.644	468.0636		Cromolyn	C23 H16 O11			C23 H16 O11	C23 H16 O11	12.02	1
Cpd 28: Questinol; C16 H12 O6	11.697	300.0632	6685	Questinol	C16 H12 O6			C16 H12 O6	C16 H12 O6	0.66	
Cpd 10: Scutellarein; C15 H10 O6	11.774	286.0471	4448	Scutellarein	C15 H10 O6			C15 H10 O6	C15 H10 O6	2.22	
Cpd 12: (x)-1-Nonen-3-yl acetate; C11 H20 O2	11.826	184.1467	3059	(x)-1-Nonen-3-yl acetate	C11 H20 O2			C11 H20 O2	C11 H20 O2	-2.12	

Qualitative Compound Report

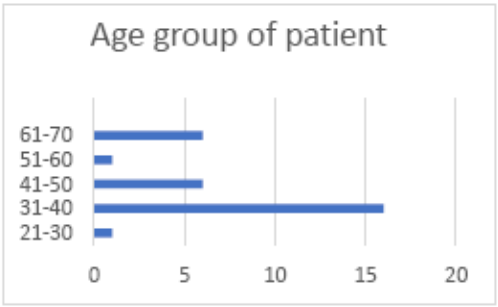
Cpd 51: Lappaconitine; C32 H44 N2 O8	11.975	584.3079	92140	Lappaconitine	C32 H44 N2 O8			C32 H44 N2 O8	C32 H44 N2 O8	3.12	3
Cpd 52: N-Nitrosotomatidine; C27 H44 N2 O3	12.24	444.3299		N-Nitrosotomatidine	C27 H44 N2 O3			C27 H44 N2 O3	C27 H44 N2 O3	11.93	10
Cpd 53: Lappaconitine; C32 H44 N2 O8	12.334	584.309	148716	Lappaconitine	C32 H44 N2 O8			C32 H44 N2 O8	C32 H44 N2 O8	1.38	3
Cpd 54: Lappaconitine; C32 H44 N2 O8	12.699	584.3081	61485	Lappaconitine	C32 H44 N2 O8			C32 H44 N2 O8	C32 H44 N2 O8	2.86	3
Cpd 55: Protobassic acid; C30 H48 O6	13.362	504.3505	68274	Protobassic acid	C30 H48 O6			C30 H48 O6	C30 H48 O6	-10.73	10
Cpd 56: 3-Deoxy-D-manno-octulosonate; C8 H14 O8	14.242	238.0667		3-Deoxy-D-manno-octulosonate	C8 H14 O8			C8 H14 O8	C8 H14 O8	9.03	10
Cpd 57: Periulactone; C30 H46 O7	14.248	518.3297		Periulactone	C30 H46 O7			C30 H46 O7	C30 H46 O7	-10.36	10
Cpd 58: (S)-3-Methylthiohexyl hexanoate; C13 H26 O2 S	14.367	246.1668		(S)-3-Methylthiohexyl hexanoate	C13 H26 O2 S			C13 H26 O2 S	C13 H26 O2 S	-5.74	10
Cpd 59: 9(S)-HpOTrE; C18 H30 O4	14.499	310.2181		9(S)-HpOTrE	C18 H30 O4			C18 H30 O4	C18 H30 O4	-11.94	10
Cpd 30: Cirsimaritin; C17 H14 O6	14.523	314.0795	3800	Cirsimaritin	C17 H14 O6			C17 H14 O6	C17 H14 O6	-1.46	
Cpd 26: C15 H10 O5	15.363	270.0526	127		C15 H10 O5	270.0528	-0.67	C15 H10 O5	C15 H10 O5		
Cpd 6: MG(15:0/0:0/0:0); C18 H36 O4	15.838	316.2611	2519	MG(15:0/0:0/0:0)	C18 H36 O4			C18 H36 O4	C18 H36 O4	0.87	
Cpd 60: Contigynasterol; C29 H48 O7	15.896	508.3458	52620	Contigynasterol	C29 H48 O7			C29 H48 O7	C29 H48 O7	-11.31	7
Cpd 61: Esculentic acid (Phytolacca); C30 H46 O6	16.427	502.3353	52087	Esculentic acid (Phytolacca)	C30 H46 O6			C30 H46 O6	C30 H46 O6	-11.74	7
Cpd 62: [7]-Paradol; C18 H28 O3	16.78	292.2077		[7]-Paradol	C18 H28 O3			C18 H28 O3	C18 H28 O3	-13.19	10
Cpd 63: 10-Oxo-11-octadecen-13-olide; C18 H30	16.872	294.2235	334582	10-Oxo-11-octadecen-13-olide	C18 H30 O3			C18 H30 O3	C18 H30 O3	-13.74	10
Cpd 64: 10-Oxo-11-octadecen-13-olide; C18 H30	17.2	294.2237		10-Oxo-11-octadecen-13-olide	C18 H30 O3			C18 H30 O3	C18 H30 O3	-14.21	10
Cpd 65: Saccharocin; C21 H40 N4 O12	17.364	540.2669		Saccharocin	C21 H40 N4 O12			C21 H40 N4 O12	C21 H40 N4 O12	-4.83	1
Cpd 66: Triamcinolone hexacetonide; C30 H41 F O7	17.373	532.2783		Triamcinolone hexacetonide	C30 H41 F O7			C30 H41 F O7	C30 H41 F O7	10.03	1
Cpd 67: [7]-Paradol; C18 H28 O3	17.449	292.2076		[7]-Paradol	C18 H28 O3			C18 H28 O3	C18 H28 O3	-12.87	10
Cpd 68: Diisopentyl thiomalate; C14 H26 O4 S	17.65	290.1554		Diisopentyl thiomalate	C14 H26 O4 S			C14 H26 O4 S	C14 H26 O4 S	-0.73	9
Cpd 69: [7]-Paradol; C18 H28 O3	17.761	292.2082		[7]-Paradol	C18 H28 O3			C18 H28 O3	C18 H28 O3	-14.89	10
Cpd 70: Ophiobolin A; C25 H36 O4	17.918	400.2665		Ophiobolin A	C25 H36 O4			C25 H36 O4	C25 H36 O4	-12.96	7
Cpd 71: 12-Hydroxy-8,10-octadecadienoic acid; C18 H32 O3	18.265	296.2394		12-Hydroxy-8,10-octadecadienoic acid	C18 H32 O3			C18 H32 O3	C18 H32 O3	-14.29	10
Cpd 72: 2alpha-Hydroxypyracrenic acid; C39	18.342	634.3943		2alpha-Hydroxypyracrenic acid	C39 H54 O7			C39 H54 O7	C39 H54 O7	-11.53	4
Cpd 73: Nb-Stearoyltryptamine; C28 H46	18.392	426.3564		Nb-Stearoyltryptamine	C28 H46 N2 O			C28 H46 N2 O	C28 H46 N2 O	10.92	10
Cpd 74: 10-Oxo-11-octadecen-13-olide; C18 H30	18.53	294.2235		10-Oxo-11-octadecen-13-olide	C18 H30 O3			C18 H30 O3	C18 H30 O3	-13.59	10
Cpd 75: 3-O-trans-Feruloyleuscaphic acid; C40 H56 O8	18.631	664.4057		3-O-trans-Feruloyleuscaphic acid	C40 H56 O8			C40 H56 O8	C40 H56 O8	-12.26	4
Cpd 76: Liquiritic acid; C30 H46 O4	18.638	470.3444		Liquiritic acid	C30 H46 O4			C30 H46 O4	C30 H46 O4	-10.28	10
Cpd 77: Nb-Stearoyltryptamine; C28 H46	18.721	426.3563	237441	Nb-Stearoyltryptamine	C28 H46 N2 O			C28 H46 N2 O	C28 H46 N2 O	11.16	10
Cpd 78: Liquiritic acid; C30 H46 O4	18.943	470.3451		Liquiritic acid	C30 H46 O4			C30 H46 O4	C30 H46 O4	-11.74	10
Cpd 79: Nb-Stearoyltryptamine; C28 H46	19.025	426.3556	222410	Nb-Stearoyltryptamine	C28 H46 N2 O			C28 H46 N2 O	C28 H46 N2 O	12.71	10
Cpd 80: 10-Oxo-11-octadecen-13-olide; C18 H30	19.492	294.2237		10-Oxo-11-octadecen-13-olide	C18 H30 O3			C18 H30 O3	C18 H30 O3	-14.31	10
Cpd 81: APGPR Enterostatin; C21 H36 N8 O6	20.277	496.2787	210460	APGPR Enterostatin	C21 H36 N8 O6			C21 H36 N8 O6	C21 H36 N8 O6	-5.98	6
Cpd 82: APGPR Enterostatin; C21 H36 N8 O6	20.649	496.278		APGPR Enterostatin	C21 H36 N8 O6			C21 H36 N8 O6	C21 H36 N8 O6	-4.45	6
Cpd 83: APGPR Enterostatin; C21 H36 N8 O6	20.994	496.278		APGPR Enterostatin	C21 H36 N8 O6			C21 H36 N8 O6	C21 H36 N8 O6	-4.51	6
Cpd 84: Pokeberrygenin; C31 H48 O6	21.176	516.3507		Pokeberrygenin	C31 H48 O6			C31 H48 O6	C31 H48 O6	-10.94	10
Cpd 1: 6-Hydroxy-4-noradecanone; C19 H38 O2	21.247	298.2869	5603	6-Hydroxy-4-noradecanone	C19 H38 O2			C19 H38 O2	C19 H38 O2	0.95	
Cpd 85: Elaidolinoleic acid; C18 H30 O2	22.16	278.2285		Elaidolinoleic acid	C18 H30 O2			C18 H30 O2	C18 H30 O2	-14.14	7
Cpd 86: Oleanolic acid; C30 H48 O3	22.169	456.3669		Oleanolic acid	C30 H48 O3			C30 H48 O3	C30 H48 O3	-14.33	10
Cpd 87: 1,2,3-Tris(1-ethoxyethoxy)propane; C15 H32 O6	22.179	308.2131		1,2,3-Tris(1-ethoxyethoxy)propane	C15 H32 O6			C15 H32 O6	C15 H32 O6	22.17	1
Cpd 88: TG(18:2(9Z,12Z)/16:0/18:3(9Z,12Z,15Z))[iso6]; C55 H96 O6	22.232	852.7095		TG(18:2(9Z,12Z)/16:0/18:3(9Z,12Z,15Z))[iso6]	C55 H96 O6			C55 H96 O6	C55 H96 O6	13.14	2
Cpd 5: C18 H36 O	22.451	268.2769	2203		C18 H36 O	268.2766	0.89	C18 H36 O	C18 H36 O		
Cpd 89: Oleanolic acid; C30 H48 O3	22.46	456.3668		Oleanolic acid	C30 H48 O3			C30 H48 O3	C30 H48 O3	-14.17	10
Cpd 90: (3beta,17alpha,23S)-17,23-Epoxy-3,28,29-trihydroxy-27-norlanost-8-en-24-one; C29 H46 O5	22.534	474.3384	102908	(3beta,17alpha,23S)-17,23-Epoxy-3,28,29-trihydroxy-27-norlanost-8-en-24-one	C29 H46 O5			C29 H46 O5	C29 H46 O5	-8.18	10
Cpd 91: Oleanolic acid; C30 H48 O3	22.784	456.3666		Oleanolic acid	C30 H48 O3			C30 H48 O3	C30 H48 O3	-13.71	10
Cpd 92: Isoglabrolide; C30 H44 O4	22.792	468.3178		Isoglabrolide	C30 H44 O4			C30 H44 O4	C30 H44 O4	13.22	9
Cpd 93: TG(20:4(5Z,8Z,11Z,14Z)/14:0/20:4(5Z,8Z,11Z,14Z))[iso3]; C57 H94 O6	22.797	874.693		TG(20:4(5Z,8Z,11Z,14Z)/14:0/20:4(5Z,8Z,11Z,14Z))[iso3]	C57 H94 O6			C57 H94 O6	C57 H94 O6	13.72	2
Cpd 94: TG(18:2(9Z,12Z)/16:0/18:3(9Z,12Z,15Z))[iso6]; C55 H96 O6	22.842	852.7104		TG(18:2(9Z,12Z)/16:0/18:3(9Z,12Z,15Z))[iso6]	C55 H96 O6			C55 H96 O6	C55 H96 O6	12.08	2

Qualitative Compound Report

Compound 95	23.156		138182								
Cpd 14: Gallic acid; C7 H6 O5	23.507	170.0215	952	Gallic acid	C7 H6 O5			C7 H6 O5	C7 H6 O5	0.4	
Compound 96	23.561		194427								
Cpd 97: Deserpidine; C32 H38 N2 O8	23.683	578.2605		Deserpidine	C32 H38 N2 O8			C32 H38 N2 O8	C32 H38 N2 O8	4.04	4
Compound 98	23.921		194168								
Compound 99	24.245		166478								
Cpd 100: 2R-hydroxy-stearic acid; C18 H36 O3	24.666	300.2704		2R-hydroxy-stearic acid	C18 H36 O3			C18 H36 O3	C18 H36 O3	-13.12	4
Cpd 7: Hydroxyhydroquinone; C6 H6	24.747	126.0315	506	Hydroxyhydroquinone	C6 H6 O3			C6 H6 O3	C6 H6 O3	1.39	
Cpd 9: C6 H6 O3	24.747	126.0315	506		C6 H6 O3	126.0317	-1.52	C6 H6 O3	C6 H6 O3		

Table &Graph
Distribution of case according to age group

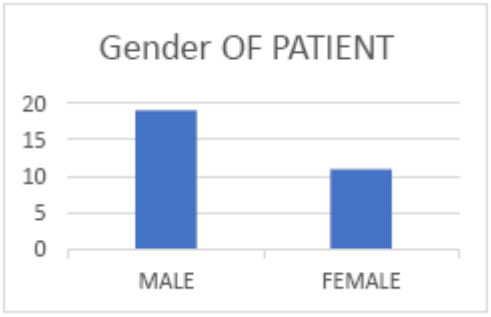
Age group	frequancy	percentage
21-30	1	3.33%
31-40	16	53.33%
41-50	6	20%
51-60	1	3.33%
61-70	6	20%
total	30	100%



In this study 30 cases were selected from all age group randomly, from which 21-30 age group,1 case (3.33%) were from 31-40age group,16cases (53.33%) from 41-50 age group,6 cases (20%) were from 51-60 age group,1 case (3.33%) were from 61-70 age group,6 cases (20%) Maximum number of patients were recorded from 31-40age group. The least common affected age group was 21-30 & 51-60 age group.

Table &Graph
Distribution of case according to Gender

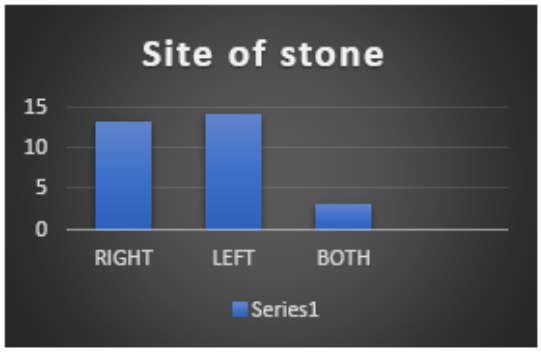
gender	male	female
No. of patient	19	11



As shown in the table, out of 30 cases of study,19 cases were observed in male&11 cases were observed in female.

Table &Graph
Distribution of cases on the basis of site of stone

Right side	13
Left side	14
Both side	3

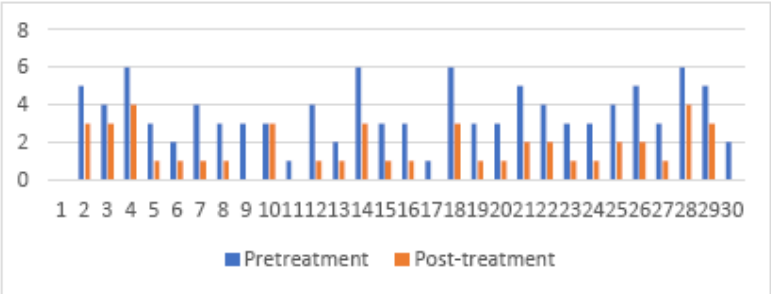


In this study out of 30 cases of renal stone, 13 right side, 14 left side, and 3 case of both side.

Table & Graph of NPRS Scale

S. NO.	NPRS value before treatment(X1)	NPRS value after treatment(X2)
1.	3	0
2.	5	3
3.	4	2
4.	6	1
5.	7	7
6.	2	1
7.	4	0
8.	3	1
9.	3	0
10.	1	1
11.	4	1
12.	2	0
13.	6	2
14.	3	1
15.	3	1
16.	1	0
17.	6	2
18.	3	2
19.	3	2
20.	5	4
21.	4	1
22.	3	1
23.	6	2
24.	5	2
25.	3	1
26.	2	0
27.	4	1
28.	3	1
29.	3	1
30.	2	0

Table- Distribution of cases on the basis of NPRS Score

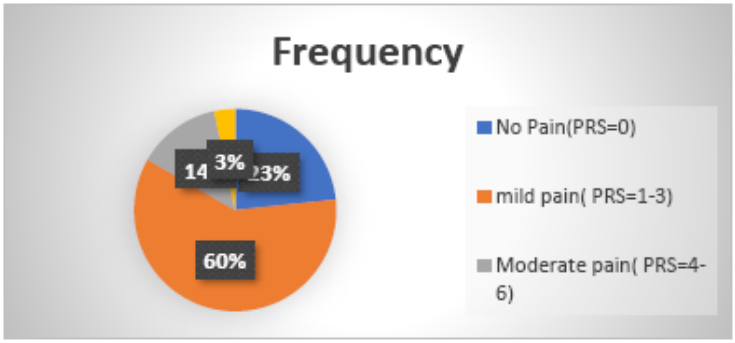


Graph- Distribution of cases on the basis of NPRS Score

In this study changes observed between pretreatment and post treatment by NPRS score of 30 cases out ofwhich 7 no pain, cases were 18 mild pain, 4 cases moderately pain, 1 case having worst sever pain.

Table & Graph of Result obtained

Criteria	Frequency	Percentage	Result
No pain (PRS 0)	7	23%	cure
Mild pain (PRS 1-3)	18	60%	Remarkably improved
Moderate pain (PRS 4-6)	4	14%	Moderately improved
Worst Severe pain (PRS 7-10)	1	3%	No change
total	30	100%	



Graph-Distribution of Cases According to Result Obtained

In this study of 30 cases, 7 cases (23%) of cure (no pain), 18 cases (60%) remarkably Improved (mild pain), 4 cases (14%) moderate improved (moderate pain), and 1 case (3%) is no change (worst severe pain).

STATISTICAL ANALYSIS

S NO.	NPRS value before treatment(X1)	NPRS value after treatment(X2)	d =(x1-x2)	$\bar{D}= \frac{\Sigma d}{N}$	(d - D)	$(d - D)^2$
1.	3	0	3		0.734	0.538
2.	5	3	2		-0.266	0.070
3.	4	2	2		-0.266	0.070
4.	6	1	5		2.734	7.474
5.	7	7	0		-2.266	5.135
6.	2	1	1		-1.266	1.602
7.	4	0	4		1.734	3.006
8.	3	1	2		-0.266	0.070
9.	3	0	3		0.734	0.538
10.	1	1	0		-2.266	5.134
11.	4	1	3		0.734	0.538
12.	2	0	2		-0.266	0.070
13.	6	2	4		1.734	3.006
14.	3	1	2		-0.266	0.070
15.	3	1	2		-0.266	0.070
16.	1	0	1		-1.266	1.602
17.	6	2	4		1.734	3.006
18.	3	2	1		-1.266	1.602
19.	3	2	1		-1.266	1.602
20.	5	4	1		-1.266	1.602
21.	4	1	3		0.734	0.538
22.	3	1	2		-0.266	0.070
23.	6	2	4		1.734	3.006
24.	5	2	3		0.734	0.538
25.	3	1	2		-0.266	0.070
26.	2	0	2		-0.266	0.070
27.	4	1	3		0.734	.538
28.	3	1	2		-0.266	0.070
29.	3	1	2		-0.266	0.070
30.	2	0	2		-0.266	0.070
			$\sum d=68$	$\bar{D}=2.266$		$\sum(d-D)^2=41.844$

Standard deviation for data is calculated by-

$$S_D = \sqrt{\frac{\Sigma(d-D)^2}{n-1}}$$

Here, *SD* = Standard Deviation
n = No. of observations

$$S_D = \sqrt{\frac{41.844}{30-1}}$$

$$S_D = \sqrt{\frac{41.844}{29}} = \sqrt{1.4428}$$

$$S_D = 1.2011$$

Standard error is calculated by-

$$S_E = \frac{S_D}{\sqrt{n}} = \frac{1.2011}{\sqrt{30}}$$

$$= \frac{1.2011}{5.4772} = 0.2192$$

Here, *SE* = Standard Error

The 't' value is calculated by-

$$t_{stat} = \frac{\bar{D}}{S_E} = \frac{2.266}{0.2192} = 10.3375$$

Degree of freedom = (n-1)
=30-1=**29**

ANALYSIS OF STUDENT PAIRED T TEST THROUGH MICROSOFT EXCEL

t-Test: Paired Two Sample for Means		
Mean	3.633333	1.366667
Variance	2.378161	2.033333
Observation	30	30
Pearsion cofficient	0.674811	
Hypothesis	0	
Df	29	
T stat	10.33268	
P(T<=t) one-tail	1.56E-11	
t Critical one-tail	1.699127	
P(T<=t) two-tail	3.12E-11	
t Critical two-tail	2.04523	

Comparison with 't' table value-

The tabulated value of 't' at p=0.05(5% level of significance) with degree of freedom being 29 is **2.043**. Here, the calculated value of 't' is = **10.33268**

Since the calculated value of 't' is greater than the tabulated 't' value at = 0 · 05 level with degree of freedom29. Therefore, it shows that the difference is not significant. Hence, we accept the ***alternative Hypothesis.***

Discussion

The study discussion was under taken to ascertain the quantitative &qualitative study of sample ocimum canum mother tincture and their medicinal efficacy through clinical trial. The study was carried out in two phases. At the first phytochemical analysis of ocimum canum mother tincture at homoeopathic pharmacy laboratory of government homoeopathic medical college & hospital. At second phase the standerdised mother tincture of ocimum canum clinically applied on patient of experimental group. The experimental group was 30 (n=30) recieved mother tincture.

After phytochemical analysis of ocimum canum, such as alkaloid, flavonoid, tannin, saponine carbohydrate, terpenoid and HRLCMS was carried out. In HRLCMS find out approx 100 compound such as Phosphatidyl Glycerol, Rotigotin, Axisothiocyanate, Imidapril, Kuwonon Z Methoxyhippuric Acid, Farnesylcysteine, Fonsecinone B, Opthalmic Acid, Benfluralin, Vanillic Acid, 4-Biphenylamine, Lividomycin B, Nitrovin, 2-C3- (Carboxy-3-Aminopropyl)- L-Histidin, Glyceryllactopalmitate, 1, 4-Cyclohexanedione, Oxacyclotetradecan-2-One, Edetate, 8-Azaadenosine, Propicillin, Aspartyl-Glutamate, Glutamyl-Lysine, Piretanide, 1- Octen-3-Yl-Primeveroside, Avocadene2-Acetate, D6-Ambrettolide, 16-Oxo-Palmitate, 3-Hydroxymugineic Acid, Etc.

So I have studied 30 cases of kidney stone and I have made an attempt to assess utility of homoeopathic medicine in the management of kidney stone.

Age and Gender- This study shows that incidence of calculi formation was in 21-30age group, 1case (3.33%),31-40age group,16cases (53.33%) from41-50 age group,6 cases (20%) were from 51-60 age group,1 case (3.33%) were from 61-70 age group,6 cases (20%) Maximum number of patients were recorded from 31-40age group. And it is also observed that incidence of calculi formation was more in male then in females. Out of 30 cases 19 cases (63.33 %) were male and in 11 cases (36.66 %) were female.

According to Campbell's Urology, the peak age incidence of urinary calculi is from twenties to forties. Most patients however. Report onset of disease in their teens. Three males are afflicted for every female. In this study out of 30 cases of renal stone,13 right side, 14 left side, and 3 case of both sides.

Obtained result-In this study of 30 cases, 7 cases (23%) of cure, 18 cases (60%) remarkably improved, 4 cases (14%) moderate improved, and 1 case (3%) is no change. Most of the cases are remarkably improved. Demonstrating the clinical utility of homoeopathic medicine in case on kidney stone.

NPRS SCORRING-In this study of 30 cases between before and after score of NPRS scale, out of 7 cases (23%) of no pain ,18 cases (60%) of mild pain, 4 cases (14%) of moderate pain and 1 case (3%) of worst severe pain.

Conflict of interest: Not available

Financial support: Not available

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