International Journal of Homoeopathic Sciences

E-ISSN: 2616-4493
P-ISSN: 2616-4485
www.homoeopathicjournal.com
IJHS 2021; 5(3): 136-140
Received: 06-05-2021
Accepted: 08-06-2021

Laila Sumreen
Department of Bachelor of Homoeopathic Medical Sciences, University College of Conventional Medicine, Faculty of Medicine and Allied Health Sciences, The Islamia University of Bahawalpur, Pakistan

Rida Tanveer
Department of Bachelor of Homoeopathic Medical Sciences, University College of Conventional Medicine, Faculty of Medicine and Allied Health Sciences, The Islamia University of Bahawalpur, Pakistan

Tahira Shamim
Department of Bachelor of Homoeopathic Medical Sciences, University College of Conventional Medicine, Faculty of Medicine and Allied Health Sciences, The Islamia University of Bahawalpur, Pakistan

Corresponding Author:
Laila Sumreen
Department of Bachelor of Homoeopathic Medical Sciences, University College of Conventional Medicine, Faculty of Medicine and Allied Health Sciences, The Islamia University of Bahawalpur, Pakistan

Practice of *Berberis vulgaris* and *Lycopodium clavatum* in urolithiasis: A systemic review

Laila Sumreen, Rida Tanveer and Tahira Shamim

DOI: https://doi.org/10.33545/26164485.2021.v5.i3c.417

Abstract
Urolithiasis is the most common disease of urinary tract found worldwide with approaches for its treatment that include the use of various synthetic and natural drugs or surgery in the conventional system of medicine. This systemic review was taken up to evaluate the efficacy of *Berberis vulgaris* and *Lycopodium clavatum* in the treatment of urolithiasis. Total 1471 articles were evaluated and after that 7 articles including case reports and studies were selected for systemic review and results. Total 195 patients were treated in these 7 studies and case reports, 7 patients were treated successfully with *Berberis vulgaris*. Patients treated with *Lycopodium clavatum* were 188 and the patients treated successfully were 98 (52.6%). Stone as large as 23 mm was expelled using *Lycopodium clavatum*. Both these homeopathic remedies showed positive results in treating kidney stones and can be a successful alternative of surgical and non-surgical removal of kidney stones.

Keywords: *Berberis vulgaris,* kidney stone(s), *Lycopodium clavatum*, urolithiasis, urinary calculi, renal calculi, non-surgical expulsion

Introduction
Homeopathy is the combination of two Greek terms, “homoiso” means “similar” and “pathos” means “disease” introduced by Samuel Hahneman in 18th century. As known that homeopathy has been found to be effective in the treatment of all diseases. Homeopathic medicines are the form of alternative medicines for those who are unsatisfied with conventional treatment [1]. In this system the selection of the drug based on the totality of the symptoms leads the patient to the cure and the disease heals automatically. Similia similar similibus (lets like be cure by like) is the principle of homeopathy in humans, which means that the drug can cure the disease, if given to a healthy person it can produce similar symptoms of this disease [2]. Modern medical system of treating a disease with agents that, when given to the patient, produce symptoms other than the disease also termed as "Allopathy” invented by Samuel Hahnemann in the 19th century was to distinguish it from homeopathy. Modern allopathic medicine based on anatomy, physiology and biochemistry and such treatment pays special attention to diagnosis and treats the disease through effective medicine, surgery, radiation, etc. As it is currently the most popular and anticipated treatment modality, but on the other hand have certain limitations in curing chronic disease and causing serious patient health side effects that are imperative to develop a safe and useful Medicare system [3].
Over 200 million people around the world regularly use homeopathy [4]. According to the 2019 WHO Global Report on Traditional and Complementary Medicine in Pakistan, 40-59% of the population use T&CM, with 20-39 percent of the population using homeopathy [5]. The formation of kidney stones is the most recurrent disease of the urinary system [6]. Chronic kidney disease (CKD) in South Asian countries like Pakistan are on the peak and roughly constitutes 40-50% of the urological workload in major hospitals as the cause of chronic kidney disease (CKD) is multifactorial [7]. Highest prevalence of the renal calculus disease was in the age group 40-49 in males and in the age group 30-39 in females. All over in Pakistan, the incidence ranges from 7.4 in the north, 28 in the west and 200 per 100 000 in the south [8]. Environmental factors such as gender, dehydration and hereditary factors, diet and obesity plays a major role to increase the risk of kidney stone formation [9].
Homeopathic medicines are more effective in eliminating kidney stones. *Lycopodium clavatum* and *Berberis vulgaris* have shown good results in treating urinary stones [10]. As well-known *Berberis vulgaris* (Berberideaceae) contains Berberine, oxycanthine and berbamine as its constituents.

Different parts as fruits, roots and bark of this plant are used for medicinal purposes. It is reported to possess potent hepato, nephro, and cardio protective effects. It could ameliorate these toxicities through its antioxidant, anti-inflammatory and antiapoptotic effects as well as via modulation of mitogen-activated protein kinase (MAPK) and nuclear factor-κB (NF-κB) signaling pathways. According to clinical practice *Berberis vulg*. is very useful in urinary complaints. It mainly acts on kidneys and bladder produces burning, tenderness and soreness in renal region. Due to severe action on liver it produces jaundice. It performs multifactorial physiological activities of berberine, along with its antioxidant and anticancer activities [11].

Lycopodium clavatum (Lycopodiaceae) was previously used as absorbent and to prevent pills from adhering. The plant consists of chemical constituents such as Lycopodine, alkaloids, triterpenoids and glycoside. *Lycopodium clavatum* (L.) used for the treatment of skin irritations and acne, nosebleed, inflammation of the liver, irritation of the intestinal tract, and kidney disorders. Lyco. Remedy also used for the treatment of arthritic pain, quadriplegia, contusions, dysmenorrhea, and other health problems. *Lycopodium clavatum* plants were also used to treat various mental conditions such as amnesia, anxiety, and fatigue in other Asian countries. Medium and higher potencies are better acting. As *Lycopodium clavatum* depress the action of a vegetative system and cause weakness of functional power and tissue decay [12].

The development of disease Renal stone usually begins when urine becomes supersaturated with insoluble materials like Calcium oxalate (major player), Uric acid and Urates etc. [13] resulting in deposition and formation of crystals (also known as renal calculi) at various places of the urinary system. Urinary stones are one of the most common renal problems, affecting about 5% of the world population apart from the more common pathological infections of the urinary tract (UTI) [14]. Stones are more commonly found in the upper and lower urinary tracts. Generally patients with renal calculi opt for the Western or orthodox medicines, partly because they feel unsure about if homeopathy, that uses micro doses of ultra-agitated (dynamized) medicines, can be able to remove the stones successfully although this mode of treatment is otherwise quite popular for treatment of other general diseases like fever, diarrhea etc.

Homoeopathic remedies are recorded for removal of renal stones. Patients who need a cost effective alternative treatment devoid of performing any surgical procedure due to any disease condition or old ages an additionally recorded studies were collected to facilitate those patients. *Berberis vulgaris* and *Lycopodium clavatum* were being used to get rid of the symptoms associated with kidney stones and to remove kidney stones [15]. While, in allopathy there is no sufficient drug for the prevention and treatment of kidney stones [16]. Extracorporeal shock wave lithotripsy consists of breaking large kidney stones into smaller ones and then removing them from the body via the urinary tract [17]. However, it also caused some serious side effects such as kidney bruises, infections, and other urological complications. Nephrolithotomy also has significant complications such as preoperative bleeding, pain, rheumatic diseases etc. [18]. Rheumatic diseases most commonly affects the joints, but can sometimes affect the ligaments, tendons, bones, and muscles, causing the inflammation. Modern medical treatment cannot cure rheumatic diseases. Most of the time, patients with rheumatic diseases go to the alternative treatment commonly used homeopathy [19]. In allopathy, NSAIDs and other drugs are used to treat as pain killer for a lot of effects. Methotrexate is a disease-modifying anti-inflammatory drug (DMARD) and is considered the most recommended drug for diseases. It causes some serious side effects such as lung problems, skin reactions, mood changes, hair loss, liver problems, gastrointestinal problems, decreased sperm production, and even pregnancy complications [20].

Methodology

A search was made using the databases "Google Scholar", "PubMed", "Medline" and "Researchgate" for articles including the terms '*Berberis vulgaris'* or '*Lycopodium clavatum'* in association with any of the following terms "urolithiasis", "urolithasis", "kidney(s)", "stone(s)", "homeopathy", "constitutional medicine", "lycopodium spores", "lycopodiaceae". "Urinary calculi, "renal calculi", "calculi", "colic", "non-surgical expulsion" or "homeopathic remedies" in their title published between the years 2010 to 2020. Search results included 1741 articles related to our search terms. 1367 articles excluded after screening of the Title. 89 articles excluded after evaluation of Abstract. 08 articles excluded after evaluation of Full Manuscript. Finally, 07 articles are selected for review, and they are included review.

Exclusion criteria

Articles that were not relevant to our study or those in which *Lycopodium clavatum* and *Berberis vulgaris* were not used to treat urolithiasis, those in which kidney stones were treated with some other drugs, those that were in some other language and difficult to translate and those already present on other databases where we searched were excluded.

Inclusion criteria

Articles in which *Lycopodium clavatum* and *Berberis vulgaris* are used to treat kidney stones, those in which complete data of patients was given and those in which complete diagnosis, dosage and follow-up of patients was done were included.

Data extraction

The relevant data from selected articles was extracted using the software Microsoft Excel. This data include Name of author(s), publication year, age of patient, gender, site and size of patient, investigations, prescription, and number of visits with outcome and duration of treatment.

Results and Discussion

In seven studies; including observational studies and case studies; 195 patients were prescribed with *Berberis vulgaris* and *Lycopodium clavatum*. Both of these remedies were selected on the basis of 'totality of symptoms' and 'repertorization'. Out of 195 cases, 07 cases were treated with *Berberis vulgaris*. All of these patients expelled their stones in the time duration minimum of fifteen days and maximum of 9 months. All of them successfully expelled their stones with complete amelioration of symptoms. Their Ultrasonography report was also totally normal in final follow-up. In these seven cases, three were case studies and 4 cases were reviewed from one observational study.

Other 188 cases were treated with *Lycopodium clavatum*.

186 cases were reviewed from the three observational studies. And 2 cases were reviewed from two case studies. Out of these two case studies, both patients expelled their stones within one to two months of duration. From 186 cases taken from three observational studies, 98 cases were markedly treated with *Lycopodium clavatum* in average of 06 months of duration. And 12 cases were moderately treated. 62 patients were mildly treated. 22 patients were not significant. Only 02, out of these 188 cases, were not improved and they were static.

Male and female both were treated with *Berberis vulgaris* and *Lycopodium clavatum*. Male were more in number than female with calculi. Also, patients of different ages, from young adult to old age persons, were treated. Bilateral calculi, ureteric calculi and renal calculi were expelled using these two remedies. Different sizes of calculi were treated in these studies, in which maximum size of the calculi was 23mm that was expelled by using the Homeopathic remedy *Lycopodium clavatum*.

Lycopodium clavatum

Lycopodium clavatum (Lycopodiaceae) is a perennial evergreen plant also known as "vegetable Sulphur" belongs to the psoric miasm. *Lycopodium clavatum* is a polychrest remedy and its condition arisen probably in those persons who feel he has no power and aggravated with everything which concerns with loss of power. Remedy used in urinary complaints as polyuria at night but normal urination at daytime. In typhoid and low grade fever there is involuntary micturition along with bed wetting complaints in children. Constitutionally, patient is emaciated above especially from the neck with healthy lower extremities. The symptoms usually ameliorated from warmth and heat or from warm drinks and aggravate from cold drinks [21].

Table 1: Treatment of Urinary Calculi by *Lycopodium clavatum*

Author(s)	Pb. Year	Age of the patient	Sex of the patient	Site and Size of the stone	Lab. Test	Prescription	No. of interme--diate visits	Outcome	Duration of treatment
Mukherjee *et al.*	2018	31 years	Male	Rt. renal = 7.6, Rt. Ureter= 11mm	USG	Lyco (30C, 200C, 1M)	06 visits	Normal USG with no any stone	06 months and 15 days
Mukherjee *et al.*	2018	80 years	Male	Rt. renal = 23mm & 5mm	USG	Lyco (30C, 200C, 1M)	03 visits	Normal USG with no any stone	03 months and 05 days
Mukherjee *et al.*	2018	21 years	Female	Rt. Kidney= 7.2mm, Lt. kidney = 6mm	USG	Lyco (30C, 200C, 1M)	04 visits	Normal USG with no any stone	06 months and 23 days
Mukherjee *et al.*	2018	50 years	Female	Rt. Kidney= 6.3mm & 6.4mm	USG	Lyco (30C, 200C, 1M)	05 visits	Normal USG with no any stone	04 months and 25 days
Mukherjee *et al.*	2018	25 years	Male	Rt. Kidney= 5.9mm	USG	Lyco (30C, 200C, 1M)	05 visits	Normal USG with no any stone	06 months and 04 days
Mukherjee *et al.*	2018	22 years	Male	Rt. Kidney = 5mm	USG	Lyco (30C, 200C, 1M)	02 visits	Normal USG with no any stone	01 month and 21 days
Mukherjee *et al.*	2018	50 years	Male	Rt. Kidney= 16mm	USG	Lyco (30C, 200C, 1M)	02 visits	stone size reduced to 9.4mm	o1 month and 19 days, and treatment was still continued
Niraj Parikh	2015	38 years	Male	Rt. Ureter = 12mm	USG	Lyco (200C)	01 visit	Normal USG with no any stone	25 days only
Akshaya Kumar Hati	2018	43 years	Male	Rt. Ureter = 12.0 x 6.0 mm	USG	Lyco	03 visits	Normal USG with no any stone	01 month and 26 days

Table 1: No. of patients treated with *Lycopodium clavatum* with different outcomes in observational studies

Author(s)	Publication year	No. of patients	Gender	Investigation	Prescription	Outcome
Siddiqui *et al.*	2011	90	72 males 18 females	USG	Lyco (30C, 200C,1M)	marked improvement = 41, moderate improvement = 06, mild improvement = 31, not significant improvement =11, worse =0, static= 01
Siddiqui, Dixit, Nayak, & Singh	2010	90	72 males 18 females	USG	Lyco (30C, 200C,1M)	marked improvement = 41, moderate improvement = 05, mild improvement = 31, not significant improvement =11, not improved= 1

Berberis vulgaris

B. vulgaris (Berberidaceae) is the largest woody plant found in Iraq, Afghanistan, Turkmenistan, western Pakistan and Central Asia etc. *Berberis vulgaris* is useful in gouty constitution [22]. The tiny stones like pinheads travel to ureter or bladder which causes the patient to suffer from radiating pain. The symptoms include dark color urine with sediments. Patient will have irregular urination with excessive deposits of uric acid and urate also with burning; tearing and stitching pains which makes him fall in continuous motion. Soreness is present in lumbar region, he even sometimes faint due to this soreness. He cannot bear pressure on that site and has to step down so very carefully. The pain never remains at one place, always changing in character known as wandering type of pains as this pain is main feature of *Berberis vulgaris* [23].

Table 3: Treatment of urinary Calculi by *Berberis Vulgaris*

Author(s)	Pb. Year	Age of the patient	Gender of the patient	Site and Size of the stone	Lab. test	Prescription	No. of intermediate visits	Outcome	Duration of treatment
Mukherjee *et al.*	2018	62 years	Male	Rt. Kidney = 6mm, Lt. kidney= 3mm	USG	*Berberis vulgaris* (30C, 200C, 1M, 10M)	06 visits	Normal USG with no stone	9 months and 10 days
Mukherjee *et al.*	2018	46 years	Male	Rt. Kidney = 5.1mm	USG	*Berberis vulgaris* (30C, 200C, 1M)	05 visits	Normal USG with no stone	5 months and 23 days
Mukherjee *et al.*	2018	22 years	Female	Rt. Ureter= 5.5mm	USG	*Berberis vulgaris* (30C, 200C, 1M)	05 visits	Normal USG with no stone	3 months and 16 days
Mukherjee *et al.*	2018	38 years	Female	ureter= 7.4mm	USG	*Berberis vulgaris* (30C, 200C, 1M)	04 visits	Normal USG with no stone	05 months and 08 days
Niraj Parikh	2015	42 yeas	Male	ureter= 10mm	USG	*Berberis vulgaris* (200C)	03 visits	Normal USG with no stone	01 month and 27 days
Ashish Kumar Jaiswal *et al.*	2017	35 years	Male	Lt. UVJ = 12.6 x 6.3mm	USG	*Berberis vulgaris* (30C, 200C, 1M)	08 visits	Normal USG with no stone	03 months
Dr. Devika M	2020	42 years	Male	Lt. kidney = 6mm	USG	*Berberis vulgaris* (Q)	04 visits	Normal USG with no stone	15 days only

Table 4: Improved assessment of *Berberis vulgaris* and *Lycopodium clavatum*

Medicine Prescribed	No of patients	Percentage	Improved Assesment				
			Marked Improvement	Moderate Improvement	Mild Improvement	Not Significant	No Improvement
Berberis vulgaris	07	3.58	07	_	_	_	_
Lycopodium clavatum	188	96.41	98	12	62	22	2
Total	195	99.9	98	12	62	22	2

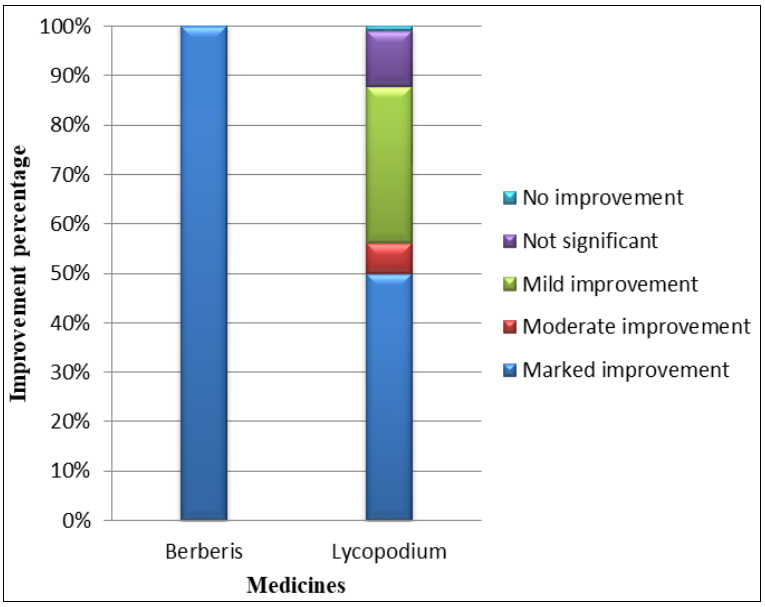

Fig 1: Percentage comparison of both medicines (*Berberis vulgaris* and *Lycopodium clavatum*)

Similar to previous studies, Male predominance among patients was found. 80% (n=156) patients were male and 20% (n=39) were females out of total 195 patients. Patients were from all age groups. Treatment of kidney stones with *Berberis vulgaris* was very effective as 1 patient was treated within 15 days, 1 patient in less than 2 months, 2 patients in 3 months, 2 patients require less than 6 months and 1 patient took more than 9 months to get cured. This finding showed that *Berberis vulgaris* is very effective in treating kidney stone mostly within 6 months and is supportive evidence of effectiveness and efficacy of this drug. Treating kidney stones with *Lycopodium clavatum* showed beneficial results as 52.6% (n=98) patients were treated within 6 months of treatment and only 1% (n=2) patients showed no improvement at all. These results provides a very supporting evidence in favor of these homeopathic drugs successfully treating kidney stones and will help to contradict beliefs and studies that they are not beneficial.

One very interesting finding was the expulsion of 23 mm stone. It was in contradiction with popular beliefs that stones greater than 8 mm in size require surgical removal and cannot be expelled with drugs. Our review is supportive of the idea of effectiveness of homeopathic medicine specially *Lycopodium clavatum* and *Berberis vulgaris* in treating kidney stones and more experimental trials and studies are required in support of this idea.

Conclusions

This was a systemic analysis with positive results of the Homeopathic remedies; *Berberis vulgaris* and *Lycopodium clavatum*, in the treatment of urinary calculi. With the knowledge of individualization and case taking, well

selected remedy will definitely treat the case. Size of the stone does not matter if it is non-obstructing. Although the studies are from high volume experienced centers and may not be sufficient to alter everyday routine practice, but it would be sufficient to change the myths regarding the use of Homeopathic remedies for the treatment of renal calculi and it will prove it as a non-surgical way of treating this kind of surgical cases. This review has shown that the efficacy of *Berberis vulgaris* and *Lycopodium clavatum* allows an alternative to surgery in renal calculi, even of sizes more than 8mm that is usually said to be a limit in surgical cases. In experienced hands, homeopathy can treat renal stones of >8mm sizes even of 23mm, without causing sort of complications. Although in this study they have completely ameliorated both mild and severe symptoms in 100% of the cases.

References

1. Chopra P, Ajmera P, Yadav S, Singh M. 2021 Efficacy and Patient Satisfaction from Homoeopathic Treatment in Gynecological Disorders. Int J Pub Health Safe 2021;6(3):2-5.
2. Vithoulkas G. The science of homoeopathy. J R Soc Med 2006;99(12):607-10.
3. Nandha R, Singh H. Amalgamation of ayurveda with allopathy: A synergistic approach for healthy society. Int. J Green Pharm 2013, 7(3).
4. Prasad R. Homoeopathy booming in India. The Lancet 2007;370(9600):1679-80.
5. WHO global report on traditional and complementary medicine 2019. ISBN 978-92-4-151543-6.
6. Delfan B, Baharvand-Ahmadi B, Bahmani M, Mohseni N, Saki K, Rafieian-Kopaei M *et al.* An ethnobotanical study of medicinal plants used in treatment of kidney stones and kidney pain in Lorestan province, Iran. J Chem. Pharm. Sci 2015;8(4):693-9.
7. Ullah K, Butt G, Masroor I, Kanwal K, Kifayat F. Epidemiology of chronic kidney disease in a Pakistani population. Saudi J Kidney Dis Transpl 2015;26(6):1307.
8. Ahmad S, Ansari TM, Shad MS. Prevalence of renal calculi; type, age and gender specific in Southern Punjab, Pakistan. Professional Med J 2016;23(4):389-395. DOI: 10.17957/TPMJ/16.2893.
9. Vandhana S, Sundaram KSM. Evolving Epidemiology and Economic Burden of Renal Stones in Rural India-A Retrospective Study. IJERME 2016;1(1):2455-4200.
10. Sahoo AR, Hati AK, Nayak C. Treatment of Urinary Stones with Constitutional Homoeopathic Medicines-Two Evidence-Based Case Reports. Homoeopathic Link 2019;32(01):036-42.
11. Ilyas S, Tabasu R, Iftikhar A *et al.* Effect of *Berberis vulgaris* L. root extract on ifosfamide-induced *in vivo* toxicity and *in vitro* cytotoxicity. Sci Rep 2021;11:1708. https://doi.org/10.1038/s41598-020-80579-5.
12. Wang B, Guan C, Fu Q. The traditional uses, secondary metabolites and pharmacology of *Lycopodium* species. Phytochem Rev 2021. https://doi.org/10.1007/s11101-021-09746-4.
13. Dropkin BM, Moses RA, Sharma D, Pais VM. The natural history of non-obstructing asymptomatic renal stones managed with active surveillance J Urol 2015;193(4):1265-1269.
14. Goldman JD, Julian K. Urinary tract infections in solid organ transplant recipients: Guidelines from the American Society of Transplantation Infectious Diseases Community of Practice. Clin Transplant 2019;33(9):e13507.
15. Barron J. Formulation for alleviation of kidney stone and gallstone symptoms and method of treatment. Google Patents 2016.
16. Panigrahi PN, Dey S, Jena SC. Urolithiasis: Critical analysis of mechanism of renal stone formation and use of medicinal plants as antiurolithiatic agents. Asian J Anim Vet Adv 2016;11(1):9-16.
17. Khan F, Haider M, Singh M. A comprehensive review on kidney stones, its diagnosis and treatment with allopathic and ayurvedic medicines. Urol Nephrol Open Access J 2019;7(4):69-74.
18. Pastor HN, Carrion PL, Martinez JR, Pastor JG, Martinez MM, Virseda JR. Renal hematomas after extracorporeal shock-wave lithotripsy (ESWL). Actas Urol. Esp 2009;33(3):296-303.
19. Kyriazis I, Panagopoulos V, Kallidonis P, Ozsoy M, Vasilas M, Liatsikos E. Complications in percutaneous nephrolithotomy. World J Urol 2015;33(8):1069-77.
20. Shea B, Swinden MV, Ghogomu ET, Ortiz Z, Katchamart W, Rader T *et al.* Folic acid and folinic acid for reducing side effects in patients receiving methotrexate for rheumatoid arthritis. The Journal of Rheumatology 2014;41(6):1049-60.
21. Rathore RS, Aggarwal A, Reddy ESR, Sharma P, Singh C, Chakraborty PK. A study to ascertain the effect of berberis vulgaris, hydrangea, cantharis, lycopodium clavatum and staphysagria in renal calculi. Int J Hom Sci 2021;5(1):25-28.
22. Diorge Jônatas M, Mohamad Hesam S. Plant species used in Brazil and Asia regions with toxic properties Phytother Res 2021, 1099-1573.
23. Kent JT. Repertory of homoeopathic Materia medica, chapter- generalities, 9th impression 2015.