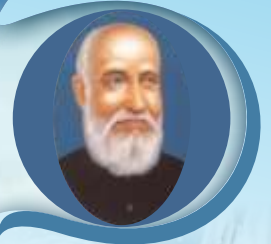


FATHER MULLER HOMOEOPATHY RESEARCH BULLETIN

2022



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Dear readers

The Research and Scientific Committee of Father Muller Homeopathic Medical College is proud to present before you the first edition of the Father Muller Homoeopathy Research Bulletin.

The objectives of this bulletin are: to capture the gist of the research activities conducted by the students of our institute, to portray these activities to our stake holders; and to inspire these type of activities in other campuses.

This bulletin contains the research abstracts of the undergraduate students. These abstracts were scrutinized at three levels: the student – principal investigator; the guide; and the members of the research and scientific committee. The contact details of the student/guide are provided with the abstracts.

Let me conclude this message with a prayer: I pray this bulletin to evolve into a scientific journal that publish top-notch articles received from all over the world.

Wish you a happy reading.

- Editor

For Private Circulation



Rev. Fr Roshan Crasta
Administrator

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Message

I am delighted to pen my message to the First Edition of Father Muller Homoeopathy Research Bulletin – 2022. I appreciate the initiative of the Research and Scientific Committee of Father Muller Homoeopathic Medical College headed by Dr Kurian P.J. and all the members, ably guided by Principal Dr E.S.J. Prabhu Kiran.

The main objective of this Bulletin is to capture the gist of the Research activities conducted by the students of our Homoeopathic College.

For the past few years, college makes steady progress in Research and Innovation. The initiative of 'Students' Research Club' with the theme **'PROSEED TO SUCCEED'** encourages Undergraduate students and Postgraduates to excel in Homoeopathic Research. Faculty members also encouraged to involve themselves in Research and update their knowledge of the currents through the Faculty Research Forum with the objectives – 'Inspire, Innovate, Impart'.

Thank you God Bless All.

Message



Dr E. S. J. Prabhu Kiran
Principal

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According to the American sociologist Earl Robert Babbie, "Research is a systematic inquiry to describe, explain, predict, and control the observed phenomenon".

Needless to mention, working on a research project is challenging and rewarding experience to oneself by providing an opportunity to pursue an in-depth study of any topic of interest. Father Muller Homoeopathic Medical College has taken up various initiatives to inculcate research aptitude in young minds. Today many of our undergraduates are awarded short-term studentship in Homoeopathy (STSH), a research initiative of the CCRH by providing scholarships.

Realizing the impact of the research on an institution in general and on students in particular, Father Muller Homoeopathic Medical College took another step forward by initiating Student Research Club for igniting quality research among the students.

The Research & Scientific committee of Father Muller Homoeopathic Medical College always looks forward to innovations. Through the strong support of the Management of Father Muller Charitable Institutions, we are here with a new initiative in research: the release of the 'Father Muller Homoeopathy Research Bulletin'. This bulletin consists of various research abstracts - a collection of hard work put in by the faculty and students of the college. I sincerely thank the management for their constant support given towards the research activities of the staff and students of the college. I congratulate and wish all the best to the editorial team for their sincere efforts in bringing out this bulletin.

Anti-bacterial activity of homeopathic medicine Pyrogenium on the strains of Staphylococcus aureus – an in vitro study



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Introduction : Staphylococcus aureus is one of the important bacterial pathogens. Its potential to cause a wide spectrum of pyogenic lesions involving several organs in hospital outbreaks and community acquired infections are well recognized. The effect of Staphylococcus aureus ranges from minor infections to life threatening diseases.

Pyrogenium is a well-known Homeopathic medicine used to treat septic fevers and pyogenic states. Though it is a well-known remedy used in clinical practice, in vitro studies regarding its antibacterial activity are minimum. Hence in this study, the antibacterial activity of Pyrogenium against strains of Staphylococcal aureus was assessed.

Materials and Methods : The microbial isolates of Staphylococcal aureus from the stock cultures of the Microbiology lab of Father Muller Medical College Hospital were used. Pyrogenium in 30C, 200 C and 1M dilutions were cultured in Muller Hinton agar. Ethanol, Distilled water and Vancomycin were also cultured in Muller Hinton agar and used as controls. The antibacterial activity was evaluated by estimating the zone of inhibition in the disk diffusion method, and by judging the colonization of the bacteria in the agar dilution method. With the guidance of the microbiologist the cutoff value for categorizing a drug as having antibacterial property in the disk diffusion method was if the drug should exhibit a minimum inhibitory zone of 10 mm.

Results : In Disc diffusion Method, it was observed that the maximum zone of inhibition for Vancomycin was 40 mm. Among the dilutions of Pyrogenium, the maximum of zone of inhibition was displayed by the Pyrogenium 30C – 20mm. The least zone of inhibition was displayed by distilled water – 2 mm. The differences in the zone of inhibition among the groups were statistically significant ($P = 0.035$, $P < 0.05$). In the Agar dilution method, we observed total absence of colonization in Vancomycin. Pyrogenium displayed a moderate restriction of bacterial colonization. This also showed that homeopathic medicine Pyrogenium has anti-bacterial activity against Staphylococcal aureus.

Discussion : The statistically significant results of Disc diffusion method and restriction of bacterial colonization in Agar dilution method validates the antibacterial activity of Homoeopathic medicine Pyrogenium. However, the action on antibiotic resistant strains of Staphylococcus aureus is not known through this study and needs to be further explored.

Funding agency : Father Muller Research Center

Assessing the improvement of quality of life by Lemna minor 6C in chronic nasal dysfunction



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Introduction : Chronic nasal dysfunction (CND) is a set of symptoms of nasal origin and their specific impact on the quality of life (QOL) in the patient. More number of studies of good quality trials are required to scientifically validate the judicial use of homoeopathic intervention in treating chronic nasal dysfunction. Hence we attempted to know the effect of Lemna minor in CND by conducting a pilot study using DyNaChron questionnaire.

Methodology : This study was a prospective observational design. Participants were patients of Father Muller Homoeopathic Medical College Hospital and peripheral centers attached to it. A sample size of 15 was selected for conducting the pilot study. The study was conducted after obtaining the approval from the Institution Ethics Committee and participants who consented partook in the study. Those patients who received Lemna minor 6C were assessed using DynaChron questionnaire before and after treatment. The duration of the treatment was two weeks. We performed Wilcoxon signed rank test to analyse the data.

Results : The mean score of the treatment group decreased from 17.3 to 7.00. The difference is found to be statistically significant – $p=0.001$. The data analysis reveals the homoeopathic medicine Lemna minor 6C might be effective in treating chronic nasal dysfunction.

Discussion : The medicine Lemna minor in the 6th centesimal potency indicated by symptom similarity is found to be useful in treating CND. No complications or adverse events were observed during treatment. This pilot trial has warranted the requirement of controlled clinical trials with a larger sample size for further validation of Lemna minor 6C to treat CND.

Funding agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.

Assessing the dissolution of synthetic Calcium oxalate stones by homeopathic mother tinctures of Sarsaparilla, Berberis vulgaris and Hydrangea



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Introduction : Renal calculi or kidney stones are one of the most painful medical conditions and a major cause of chronic infections and renal failure. Dietary habits, medications, and other factors like lack of exercise, obesity, and inadequate consumption of water may lead to renal disorders like renal calculi. Renal colic has been described as one of the strongest pain known. Intermittent pain which usually radiates from the flanks to the groin associated with urgency to pass urine, frequent episodes of hematuria, and abdominal discomfort along with nausea are the common symptoms of renal calculi.

The mother tinctures of Sarsaparilla, Berberis and Hydrangea are commonly used for treating calculi of calcium oxalate. But the dissolution property is not yet determined. Hence this study was conducted.

Materials & Methods

- Synthetically prepared calcium oxalate stones.
- Homeopathic mother tinctures of Sarsaparilla, Berberis vulgaris, and Hydrangea procured from Good Manufacturing Practices certified homeopathic manufacturer.
- TRIS [tris aminomethane] Buffer
 - 0.9494 N KMnO_4 for titrimetry
- Ammonia solution
 - 98% Concentrated Hydrochloric acid
- 2N Sulphuric acid
 - Farm eggs

Estimation of Calcium oxalate: 10mg of the test material - mother tinctures of Sarsaparilla, Berberis and Hydrangea – were mixed separately with 10mg of the calcium oxalate. Two more mixtures were made – the positive and the negative control. The positive mixture comprise of 10 mg of calcium oxalate, and 10ml of ethanol; the negative mixture comprise of 10 mg of calcium oxalate, and 10ml of water. Each mixture was packed in a semi-permeable membrane of the egg. These packed mixtures were allowed to suspend in conical flasks containing 100ml 0.1 M TRIS buffer. These conical flasks were kept in a tablet disintegrator apparatus for two hours at 37°C. The contents of each mixtures were removed into respective test tubes & numbered accordingly and 100ml of 1N Sulphuric acid was added to each test tubes and was titrated using 0.9494N KMnO_4 till a light pink color endpoint was observed. after titration the amount of dissolved calcium oxalate was calculated by subtracting the amount left in each group from the total quantity used [10mg] in each group. After the experiment, it was observed that Berberis vulgaris has the highest dissolution (0.162 mg) and water has the lowest dissolution (0.067 mg) of calcium oxalate.

Conclusion : Berberis vulgaris might be having capability to dissolve synthetic calcium oxalate stones.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.

Assessing the efficacy of homeopathic mother tincture *Spartium scoparium* in reducing the systolic & diastolic pressure in hypertensive patients



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Introduction

Hypertension is a chronic condition that cause coronary heart disease, stroke and other vascular complications. It is one of the major risk factor for cardiovascular mortality, which accounts for 20-50% of all deaths. In some age groups, the risk of cardiovascular disease doubles for each incremental increase of 20/10 mm Hg of blood pressure. Lowering the systolic & diastolic blood pressure below 140/90 mm Hg is associated with a reduction in cardiovascular complications. According to homeopathic literature, *Spartium scoparium* increases the strength of the heart, slows it & reduces the blood pressure. The effect of spartein sulphate is to lower the systolic and diastolic pressures of the provers. It acts on the myocardium and stimulate the vagus, thus lowering the blood pressure and the pulse rate. The aim of my study is to know how well *Spartium scoparium* mother tincture control the blood pressure in hypertensive patients.

Materials and methods : We conducted prospective observational study on diagnosed cases of Hypertension. We selected hypertensive individuals of both sexes, aged between 20-60 years, and whose blood pressure ranged between 140/90-200/110 mm Hg. We administered *Spartium scoparium* mother tincture after receiving their informed consent.

We calculated the sample size using the formula, $n = [z^2 p(1-p)]/d^2$ and selected 13 cases for the study. We excluded subjects who were having serious co-morbidity like heart failure, myocardial infarction, hepatic failure, renal failure & diabetes. We recorded the blood pressure after stabilizing the subject for 5 minutes in sitting position. This was the primary reading. After the primary reading, we administered *Spartium scoparium* mother tincture 20 drops in half cup of warm water. We recorded the blood pressure thrice at 30 min, 1 hour & 2hours after the administration. During the full duration of experiment, we ensured the subject is relaxed & there is no kind of physical & mental exertion. We also instructed that patient to desist from ingesting anything that might alter the blood pressure.

Result : We found the mean systolic pressure reducing from 153 mm Hg to 129 mm Hg and mean diastolic value reducing from 93 mm Hg to 82 mm Hg after 2 hours of administration. Since the data followed the non normal distribution, we conducted Kruskal Wallis to test the hypothesis. We used GNU PSPP (version 1.0.1) in the Linux operating system (Ubuntu-version 18.04.4). The data of systole and diastole were analyzed separately and was found to have a statistical difference ($p < 0.05$).

Conclusion : *Spartium Scoparium* mother tincture might be effective in the treatment of hypertension.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.

Effectiveness of homeopathic preparation of Nux vomica in reducing the craving for alcohol in alcohol dependent subjects



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Introduction : Alcohol is a major contributor to the global burden of disease and a leading cause of preventable death. Alcohol use disorder is a common psychiatric disorder and the most prevalent of all substance use disorders. Alcohol dependence poses physical, psychological, economic and social issues to the individual, families and community. But, the effectiveness of Nux Vomica – one of the remedy suggested in homeopathic literature - in reducing the craving for alcohol in dependent subjects is not yet assessed.

Materials and methods : We assessed 30 cases for craving and dependence with Penn Alcohol Craving Scale (PACS), and Severity of Alcohol Dependence Questionnaire (SADQ) respectively. Nux vomica 1M was given orally twice a day for 8 weeks. The data obtained from the pre and post treatment was statistically analyzed using paired t test..

Results: Paired t-test revealed a statistically significant difference between the pre and post treatment scores of PACS, and SADQ – $p < 0.001$ (95%CI). The mean value of alcohol craving reduced from 18.33(SD 1.35) to 10.57(SD 0.95); and the alcohol dependence reduced from 33.90(SD 2.18) to 22.23(SD 6.08)

Conclusion: The study reveals that Nux Vomica 1M might be effective in the treatment of Alcohol Dependence Syndrome by reducing the craving for Alcohol. Studies with longer duration and rigorous study design are warranted.

Funding Agency : Short-term studentship in Homeopathy, Central council for research in Homeopathy; Father Muller Charitable institutions.

Analyzing the effects of homeopathic constitutional medicine in regularizing the menstrual cycle in the patients of poly-cystic ovary syndrome.



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Introduction : Poly-cystic ovary syndrome (PCOS) is a hormonal disorder common among women of reproductive age which interferes with the reproductive and the metabolic functions. It is a multi-factorial and polygenic condition. The incidence varies between 0.5 - 4%, more common among the infertile women. It is prevalent in the young reproductive age group (20-30%). The ovaries may develop numerous small collections of fluid (follicles) and fail to regularly release eggs. According to American Society of Reproductive Medicine, European Society for Human Reproduction, PCOS can be diagnosed based on the presence of any two of the following three criteria: irregular periods, excess androgen, and polycystic ovaries. Clinical features are: obesity, menstrual abnormalities in the form of oligo-menorrhoea, amenorrhoea, dysfunctional uterine bleeding, infertility, hirsutism, acne, acanthosis nigricans, and HAIR-AN syndrome. There are several constitutional medicines – medicines prescribed using mental and physical characteristics of the patients – for regularizing the menstruation. But, the question of these medicines in regularizing the menstruation in PCOS is not yet validated, hence this study.

Material and methods: We conducted a retrospective study, and collected the data from the medical records department of Father Muller Homoeopathic Medical College Hospital. We calculated the sample size using Cochran's formula; it was 30. Data from those case records that fulfilled the inclusion, and the exclusion criteria were selected for the data analysis. The inclusion criteria were: patients belonging to the age group 14 – 45 years; diagnosed cases of PCOS prescribed homeopathic constitutional medicine; diagnosed cases of PCOS prescribed homeopathic non constitutional medicine; and cases with regular follow-ups upto six months. The exclusion criteria were cases of PCOS with other organic diseases. The primary endpoint was regularizing of the menstruation. The categorical data of regularizing of menstruation by constitutional prescription were compared with the categorical data of cases that were prescribed non-constitutional medicine. The data were analyzed using Chi Square Test.

Result : There is an association between homeopathic constitutional medicine and treatment outcome of a PCOS. 28 cases who were on constitutional medicines improved – $p=0.071$

Conclusion : The Homoeopathic Constitutional Medicine which is indicated by mental and physical characteristics might be useful in regularizing the menstrual cycle of PCOS patients.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health sciences, Karnataka.



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Assessing the efficacy of homeopathic medicine *Physostigma venenosum* 30c in improving visual acuity, and reducing refractive error in myopic patients

Introduction : Increased screen time & near work, affects the health of the eyes. *Physostigma Venenosum* 30c is suggested in homeopathic literature for complaints due to eye strain. But its efficacy in improving visual acuity and reducing refractive error in myopic patients is not yet determined.

Materials and Methods : The study was conducted on the students of Father Muller Homoeopathic Medical College and Hospital, Mangalore. It was a prospective study involving 15 individuals who had myopia. These individuals were prescribed four pills of *Physostigma Venenosum* 30c, at bedtime for three days in a week for about six weeks, by the registered homeopathic physician.

Result : The data of visual acuity, and data of refractive errors from retinoscopy was compared with the base value (pre-intervention data). We performed paired t test and found the difference to be non-significant.

Conclusion : From the above results and observations it is concluded that *Physostigma Venenosum* 30 may not be useful for improving visual acuity, and reducing refractive error of myopic patients in a period of 3 months. We believe a long-term study might provide better results.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.

Comparing the antiseptic activity of Chlorohexidine gluconate and the mother tinctures of *Calendula officinalis*, *Thuja occidentalis*, and *Rhus glabra* – A pilot study



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Introduction : Antiseptics are used extensively in hospitals and other health care centres. They are essential parts of infection control practices, especially in wound treatment and aid in the prevention of nosocomial infections. Topical antiseptics are antimicrobial agents that kill, inhibit or reduce the number of microorganisms and are thought to be essential for wound infection control. Increasing bacterial resistance to antibiotics makes the management of superficial skin infections a major medical challenge. Homeopathic mother tinctures are used as topical antiseptics for treating various skin infections, chronic ulcerative conditions, and wound infections. The homeopathic mother tinctures selected are *Calendula officinalis*, *Thuja occidentalis*, and *Rhus glabra*. This in-vitro study is an attempt to compare the antiseptic activity of the Chlorohexidine gluconate with above mentioned mother tinctures on commonly affecting bacteria.

Methodology: We used 30 microbial isolates of *Staphylococcus aureus*, *Streptococcus pyogens* from the stock cultures of the Father Muller Central Microbiology lab. Chlorohexidine gluconate was the positive control and 70% ethanol was the negative control in each test. The disc diffusion method was used for testing the antiseptic property. The microbes were grown in peptone culture broth and the opacity was adjusted to 0.5 McFarland.

The microbes were streaked as a lawn culture on Muller Hinton Agar using a sterile cotton swab. After this, the disc (Whatmann No 1) of size 6 mm diameter was saturated with the selected mother tincture (quantity 0.01ml), ethanol and placed on the agar medium. The diameter of inhibition zones was noted after overnight incubation at 37^oc. We estimated the antiseptic activity by measuring the inhibitory zone around the filter paper discs using the vernier callipers. The inhibitory zone was graded into sensitive, moderately sensitive and resistant based on the Kirby Bauer chart.

Results : We observed Chlorohexidine gluconate having the maximum antiseptic activity: the inhibitory zone in *Staphylococcus aureus* was 11 mm; and the inhibitory zone in *Streptococcus pyogens* was 4.5 mm. We observed deficient antiseptic activity in the homoeopathic mother tinctures. Among the mother tinctures, *Thuja occidentalis* exhibited the maximum antiseptic activity – a meagre 1 mm of inhibitory zone in *Staphylococcus aureus* and *Streptococcus pyogens*. Rest of the mother tinctures (*Calendula officinalis* and *Rhus glabra*) did not exhibit any anti septic activity.

Discussion : In the present study, the mother tinctures did not exhibit considerable antiseptic activity. This observation might be attributed to resistant strains of bacteria, and mother tinctures with deficient active pharmaceutical ingredients. Nevertheless, this study provide scope for exploring the antiseptic activity of *Thuja occidentalis*.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.

Assessing the effectiveness of Kali Phos in promoting the shoot and root length of *Oryza sativa* during germination



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Introduction : Agriculture, with its allied sectors, is the largest source of livelihood in India. Agro-homoeopathy is one of the newest approaches in agricultural research and studies have showed that potentized homeopathic medicines can alter the physiological activities of plants. Agro-homoeopathy is chemical-free, low-cost, non-toxic method of growing food and other crops. Application of agro-homoeopathy makes the plants resistant to disease and pests by strengthening them from the inside out. In this study, we assess the effectiveness of homeopathic medicine Kali phosphoricum in promoting the shoot and root length of *Oryza sativa* during germination. We also compared the efficacy of various potencies of Kali phosphoricum.

Materials and methods : There were eight groups based on the intervention on the seeds. The materials for intervention are Kali Phosphoricum 6C, 12C, 30C, 200C, 1M; distilled water; alcohol; and Monopotassium phosphate. The respective material for intervention on the seeds was sprayed daily in the morning and evening for a period of 3 days. Each group contained 100 seeds of *Oryza sativa*, and was placed in rolled paper towels. The germination and growth was assessed on the 4th day. The data obtained were statistically analysed using ANOVA in SPSS software.

Results : Statistical analysis have shown that there is no considerable difference in the germination of the seeds amongst the groups. But, there was a significant difference in shoot length of the seedling. On an average the shoot length was the longest in the 6c potency compared to the other potencies and control group. The shoot length of 6c potency was 0.75cm longer than the Monopotassium phosphate group (positive control). The root length was found to be the longest in distilled water. This difference is statistically significant – $p < 0.001$.

Conclusion : Kali phosphoricum in its lower potencies might have considerable effect in promoting the shoot and root length of *Oryza sativa* during germination.

Funding Agency: Dr M L Dhawale Memorial Student Research Project - Father Muller Homoeopathic Medical College and Hospital.



Evaluating the effectiveness of *Piscidia erythrina* 30c in improving the sleep quality of primary insomnia patients using Pittsburgh sleep quality index scale

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Introduction : Insomnia is a sleep disorder that leads to habitual sleeplessness or an inability to sleep. About 6% of adults suffer from insomnia. The data compiled by National Institute of Health, USA shows insomnia contributes to 10-15% of the sleep disorders. As per homeopathic literature, *Piscidia erythrina* is noted to have effect in improving quality of sleep due to long standing emotional drain. But, Its clinical effects has not been scientifically validated. Hence, we conducted this study to scientifically validate the clinical effects.

Materials And Methods : 21 cases presenting with insomnia were assessed using Pittsburgh sleep quality index scale (PSQI). Those with PSQI score 5 and above, and those who were prescribed *Piscidia erythrina* 30c were observed. The dosage of *Piscidia erythrina* 30c was four pills, every morning for 2 weeks. After 2 weeks, the cases were assessed using PSQI questionnaire. The pre and post data was statistically analyzed by paired t test.

Result : After consuming *Piscidia erythrina* 30c, 59.1% individuals felt their sleep to be fairly good; 31.8% felt their sleep to be very good; and 9.1% felt their sleep was fairly bad. The mean of PSQI score before treatment was 8.86 and after treatment was 4.95. The difference in the mean scores was found to be statistically significant – $p < 0.001$.

Conclusion : *Piscidia erythrina* 30c might be efficacious in improving sleep quality within the given time period. Studies with rigorous study designs for longer duration are warranted.

Funding Agency : Short-Term Research for Undergraduate students by Rajiv Gandhi University of Health Sciences, Karnataka.



A retrospective study to assess the efficacy of *Lycopodium clavatum* in expelling renal calculi

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Introduction : Urolithiasis/ Nephrolithiasis (renal calculi) are the most common disease of urinary tract found worldwide. It is a disease affecting the urinary tract of our body. Kidney stones are hard deposits of minerals and acid salts that stick together in concentrated urine. They can be painful when passing through the urinary tract, but usually don't cause permanent damage.

Nephrolithiasis is a global problem affecting all geographical regions throughout the globe. Annual approximate prevalence is 3-5% and approximate life time prevalence is 15-25%. Nephrolithiasis tend to be recurrent in most of the renal calculi patients.

The most common symptom is severe pain, usually in the side of the abdomen, that's often associated with nausea. Renal calculi can often be confused with appendicitis, cholecystitis, hernia, etc. We find many different approaches in the treatment of renal calculi which includes using synthetic drugs, using sound waves to break up stones or surgery to remove large stones in the conventional system of medicines.

Lycopodium clavatum acts upon the mucous membranes of the respiratory, digestive and genito-urinary organs and upon the skin, but shows the most important local action upon the liver and the digestive tract, where it produces a disturbed digestion, hepatic congestion, constipation, and upon the kidneys causing the "uric acid diathesis".

Moreover, homeopathic literature suggest *Lycopodium clavatum* as one of remedy for the treatment of renal calculi. But, the efficacy of *Lycopodium clavatum* in reducing the size of renal calculi is not scientifically validated. Hence, we conducted this study to validate it scientifically.

Materials And Methods : This study is a retrospective kind of observation. We calculated the sample size and found it to be 18. Medical records of Father Muller Homeopathic Medical College Hospital belonging to the year 2017-2020 were screened. We included patients of all age group, any gender diagnosed with renal calculi, and those were prescribed *Lycopodium* for three continuous follow ups.

Any case of burn, accident, poison, drug reaction was excluded from the study

The pre and post values of calculi size were recorded. Paired 't' test was used to statistically analyze the data.

Results : *Lycopodium clavatum* reduced the mean size of calculi from 5.68mm to 4.50mm. This difference is statistically significant with the p value 0.00576. The study revealed that only 200th potency of *Lycopodium clavatum* showed reduction of the size of the calculi in many patients. We noticed that 12 cases (66.67%) showed improvement with *Lycopodium clavatum*. Other potencies-30C, 1M, 0/1 didn't show any improvement

Conclusion : The study revealed that the homeopathic medicine *Lycopodium clavatum* might be effective in reducing the size of the renal calculi.

Funding Agency : Short-term students grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.



Assessing the efficacy of homeopathic remedy Calcarea iodata in reducing the swelling of the thyroid in the goiter patients

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Introduction : Lack of thyroxine hormone, affects the health of progeny and there is no cure for hypothyroidism but it is controllable and requires lifelong therapy. However, a substantial proportion of patients who reach biochemical treatment targets have persistent swelling of the thyroid gland. The literature in homeopathy suggest Calcarea iodata as useful in reducing the swelling of the thyroid. But, not validated. This study is aimed at assessing the efficacy of - Calcarea Iodata - in reducing the swelling of the thyroid by estimating the neck circumference of goiter patients.

Materials & Method : The present study was conducted in the outpatient departments of Father Muller Homeopathic medical College and Hospital, Mangalore. It is a prospective pilot study that involved 10 hypothyroid patients who had swelling of the thyroid. We prescribed Calcarea iodata 30/200 potency, weekly one dose for three months. The neck circumference were measured before and after the treatment. We conducted Wilcoxon rank test to prove the hypothesis.

Result : We found statistically significant decrease in the circumference of the neck: $p=0.009$. The maximum value of the neck circumference reduced from 46 cm to 43 cm. The mean value of the decrease was 0.5 cm (SD 0.84).

Conclusion : From the above results and observations, Calcarea iodata might be effective in reducing the swelling of the thyroid of goiter patients.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.



Assessing the efficacy of Ferrum phosphoricum in augmenting the hemoglobin levels in iron deficiency anemia in children

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Introduction : Anemia in children is one of the major hurdle for the developing countries like India. In homeopathy, the literature recommends Ferrum Phosphoricum to treat anemia. This research was conducted to validate this recommendation. The research studied the effectiveness of Ferrum phosphoricum in iron deficiency anemia in children (less than 16 years of age).

Methodology : Ferrum phosphoricum was administered to 13 anemic individuals whose hemoglobin levels were below normal. Individuals with congenital disorders; consuming iron tablets; suffering from multi system disorder were excluded. The Hemoglobin, Mean Corpuscular volume of RBC were estimated before and after the administration of Ferrum phosphoricum. Along with Ferrum phosphoricum, the patients were not restricted to consume iron rich food like green leafy vegetables, dried fruits, red meat etc. We analyzed the data of hemoglobin and mean corpuscular volume using Wilcoxon signed rank test to see the effect of Ferrum phosphoricum.

Result : We did not find significant effect of Ferrum phosphoricum in augmenting the hemoglobin. But we did find a significant difference in mean corpuscular volume of RBC after administering Ferrum phosphoricum.

Conclusion : Thus it can be concluded that Ferrum phosphoricum may not be effective in the treatment of iron deficiency anemia.

Funding Agency : Short-term research grant for undergraduate students, Rajiv Gandhi University of Health Sciences, Karnataka



Assessing the effectiveness of different potencies of Kalium sulphuricum in promoting the germination of green gram seeds

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Introduction : VD Kaviraj, a Dutch homeopath, and the author of the book 'Homeopathy for Farm and Garden' has much knowledge on the subject - Agro-homoeopathy. This subject has garnered some attention since it is a chemical-less, non-toxic method for crop cultivation. It claims that the plants will be resistant to disease with less dependency on pesticides, and helps the plants to grow with less dependency on chemical fertilizers. These claims are not validated. Hence in this study, we decided to observe the outcome of different potencies of Kalium Sulphuricum in promoting the germination of green gram seeds. We selected green gram seeds because its growing season is short and can grow easily in laboratory conditions; we selected Kalium sulphuricum because potassium and sulfur strengthens the plant, contributes to the early growth of the plant, helps retain water, and promote germination of the seeds. We measured the length of the shoot, root, and the leaf for determining the outcome.

Materials and methods: We prepared Kalium Sulph 6c, 12c, 30c and 200c using the distilled water as the vehicle from the back potencies of the Kalium Sulph: 5c, 29c, and 199c. We had a positive and a negative control: the fertilizer SOP, and the purified water. We selected seven glass containers, lined it with the tissue paper, and stuffed the container with absorbent cotton. We divided 70 green gram seeds equally among the glass containers. We inserted the seeds between the tissue paper and the glass wall, and moistened the cotton with the 10 ml of the medicine/control on alternate days. The primary outcome was estimated on the fourth day. We performed Kruskal Wallis test to prove the hypothesis.

Results : The seeds treated with Kali sulph 6c yielded the maximum length for the shoot, root and the length: 4.59 cm. 14.93 cm, and 2.14 cm respectively. But the difference between the control and the treatment groups were not statistically significant. Kruskal Wallis test yielded a p value = 0.423. Nevertheless, the seeds of the treatment showed protection from fungus, and insects when compared to the control group.

Conclusion : Though the Kallium sulphuricum didn't yield a favorable outcome, It is worth studying the effects of Kallium sulphuricum 6c in detail; and the protection of the seeds from pests.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.



Evaluation of antioxidant potential of Homeopathic mother tinctures Alfalfa, Conium maculatum, Hydrastis canadensis, Kreosotum and Phytolacca decandra

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Introduction : When cells use oxygen to generate energy, the mitochondria produce free radicals as a consequence of ATP production. High concentration of free radicals generate oxidative stress, a process that seriously alters cell membrane and other molecules such as proteins, lipids, lipoproteins, and the DNA. These altered molecules might initiate cancer. Many Homeopathic medicines are found to possess free radical scavenging property, but not verified. Thus, this study aims to explore the free radical scavenging properties of certain Homeopathic mother tinctures.

Methodology : Antioxidant activity of the drugs were tested using DPPH assay. The antioxidants in the Homeopathic mother tinctures reduce the violet coloured DPPH to the yellow coloured 1,1-diphenyl-2-picryl hydrazine. The anti-oxidant property of the Homeopathic mother tinctures is indirectly calculated from the change in the absorbance of DPPH at 517nm using UV-Visible spectrophotometer.

Results : The study revealed that the Homeopathic mother tinctures of Alfalfa, Conium maculatum, Hydrastis canadensis, Kreosotum and Phytolacca decandra definitely has an anti-oxidant activity. We performed ANOVA, and found statistically significant variation among the Homeopathic tinctures: $p < 0.05$. The Bonferroni post-hoc analysis revealed prominent anti-oxidant activity of Conium maculatum when compared to Kreosotum.

Conclusion : Naturally occurring compounds are always safer than synthetically prepared ones in the treatment of diseases. In conditions where tissue damage has taken place due to chemical free-radicals, it would be better to use herbal extracts. In the current study, the Homeopathic preparations have demonstrated a promising free radical scavenging activity.

Funding Agency : Short-term research grant for under-graduate students, Rajiv Gandhi University of Health Sciences, Karnataka.

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