



EFFICACY OF HOMOEOPATHIC MEDICINE IN TREATMENT OF URINARY TRACT INFECTION IN PEDIATRIC AGE GROUP – A CASE SERIES

Homeopathy

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ABSTRACT

Background: Urinary Tract Infection (UTI) is a common bacterial infection in children under 15 years, which may lead to complications like renal scarring, hypertension, and renal insufficiency if untreated. Antibiotic resistance and recurrence are rising concerns. Homoeopathic treatment offers a safe, individualized approach with minimal side effects. The uUTI symptom score objectively assesses dysuria, frequency, and urgency. This study evaluates the efficacy of homoeopathic medicines in pediatric UTIs. **Objectives:** 1. Assess the efficacy of homoeopathic medicines in treating pediatric UTI. 2. Evaluate their role in reducing recurrence and symptom severity. 3. Identify commonly prescribed remedies. **Method:** Thirty children (0–18 years) with uncomplicated UTI were selected. Detailed case-taking was done, and uUTI scores (0–12) were recorded before and after treatment. Remedies were individualized using RADAR software repertorization. Urine routine reports supported clinical findings. Paired t-test was used for statistical analysis. **Results:** Homoeopathic medicines were significantly effective; 29/30 cases (96.7%) achieved complete symptom relief (uUTI score = 0). Calculated $t = 23.23 > \text{table } t (2.045)$, confirming significance. Recurrence and frequency in chronic cases reduced; many previously recurrent cases showed no relapse during follow-up. Most frequently prescribed remedies: Cantharis, Pulsatilla, Belladonna, Lycopodium, and Ignatia.

KEYWORDS

Pediatric UTI, uUTI Symptom Score, Recurrence.

INTRODUCTION

The urinary tract is comprised of the kidneys, ureters, bladder and urethra. ⁽¹⁾ Urinary Tract Infection is defined as the microbial invasion of any of the tissue of the urinary tract extending from the renal cortex to the urethral meatus. ⁽¹⁵⁾ UTI is the third most common bacterial infection in children in developing countries after those of the gastrointestinal and respiratory tract. ⁽¹⁴⁾⁽⁷⁾

An estimate shows an annual affection of 2.4 – 2.9% children in the country. ⁽⁹⁾ During infancy, the male to female ratio is 3–5:1. Beyond 1–2 years, there is a female preponderance with male to female ratio of 1:10. The risk of occurrence of UTI before the age of 14 years is approximately 1–3% in boys and 3–10% in girls. ⁽⁴⁾

UTI is more common in female and uncircumcised male infants. During toddler years, toilet training can lead to volitional holding and bladder stasis, promoting UTIs ⁽⁵⁾

Homoeopathic medicines are known to be useful for a number of conditions related to children & adolescents and the treatment are without any side effects. The medicines are palatable and acceptability and compliance to treatment is good. Apart from treatment during acute phase, medicines promote health and can reduce the frequency of infections. ⁽¹³⁾

Homoeopathic medicines work by strengthening a child's immunity. Along with relieving common acute problems of children it can prevent recurrent episodes of ill-health. ⁽⁷⁾

MATERIALS AND METHODS

Study Design And Study Setting:

The study was designed as a case series and included 30 pediatric cases. It was conducted in the college outpatient department (OPD), a private clinic, and community health camps. The total duration of the study was 18 months.

Methodology:

Participants were selected through simple random sampling, and diagnosis was based on clinical presentation supported by urine routine examination.

Data were recorded in a standardized case format, and the uUTI symptom rating scale (0–4 for dysuria, frequency, urgency) was used to assess severity at baseline and follow-ups. Individualized homoeopathic medicines were prescribed, and patients were followed for up to six visits depending on whether the presentation was acute or chronic.

Inclusion And Exclusion Criteria:

Children between 0 and 18 years of age presenting with clinical features suggestive of recurrent urinary tract infection. Were included irrespective of sex and socio-economic background, provided they were willing to undergo homoeopathic treatment.

Cases that required surgical intervention, those with severe chronic systemic illnesses, pyelonephritis, or malignant renal disorders were excluded from the study, and children who developed signs of septicemia during the course of treatment were withdrawn.

Statistical Analysis:

Data were collected using a standardized case recording format, and remedy selection was supported by repertorization with RADAR software. The severity of illness was assessed at baseline and at the end of treatment using the rating scale for assessment of uncomplicated urinary tract infection (uUTI) symptoms. Outcomes were evaluated based on symptomatic improvement as well as urine analysis reports.

Statistical analysis was performed using appropriate standard tests, with significance determined at the 5% level. The findings were represented through tables and suitable diagrams to illustrate the distribution of cases, remedies prescribed, and treatment outcomes.

Statistical Observation

A total of 30 pediatric cases of urinary tract infection were studied. The data were analysed for distribution of cases according to remedies prescribed, gender, type of UTI, age group, and treatment outcome. The uUTI Symptom Score (0–12) was used as the primary outcome measure.

1. Remedies Prescribed

The analysis showed that individualized prescriptions varied according to presenting symptomatology and constitution. Among the most frequently indicated remedies, Cantharis was prescribed in 4 cases (13.3%), followed by Pulsatilla, Belladonna, Lycopodium, and Ignatia in 3 cases each (10%). (Figure 1)

Other remedies like Phosphoric acid, Calcarea carbonica, Sulphur, Stramonium, Sarsaparilla, Apis, Borax, Thuja, Staphysagria, Silicea, Phosphorus, Arsenicum album, Sepia, and Liliium tigrinum were used in isolated cases. This distribution highlights the individualized nature of homoeopathic prescribing, with a wide spectrum of remedies indicated rather than reliance on a single medicine.

2. Gender Distribution

Out of 30 cases, 19 were females (63.3%) and 11 were males (36.7%). This shows a clear female predominance, which correlates with established epidemiological data attributing the higher incidence in girls to anatomical predisposition, such as shorter urethra and its proximity to the anus. (Figure 2).

3. Type of UTI

In this study, 19 cases (63%) presented with acute UTI, whereas 11 cases (37%) were chronic/recurrent. This finding suggests that acute infections are more common in children, while recurrent cases emphasize the need for careful follow-up and long-term management. (Figure 4)

4. Age Distribution

Children between 3 to 16 years were included in the study. The most affected age group was 11–15 years (16 cases; 53.3%), followed by 0–5 years (6 cases; 20%), 6–10 years (6 cases; 20%), and >15 years (2 cases; 6.7%). The higher prevalence in older children and adolescents may be attributed to factors such as hormonal changes, poor hygiene practices, and behavioral tendencies like urine withholding.

5. Treatment Outcome

Out of 30 cases, 29 cases (96.7%) showed complete improvement with the uUTI Symptom Score reducing to 0/12. Only 1 case (3.3%) showed partial improvement, with the score reducing from 9/12 to 6/12 despite multiple prescriptions. No case remained unimproved or worsened.

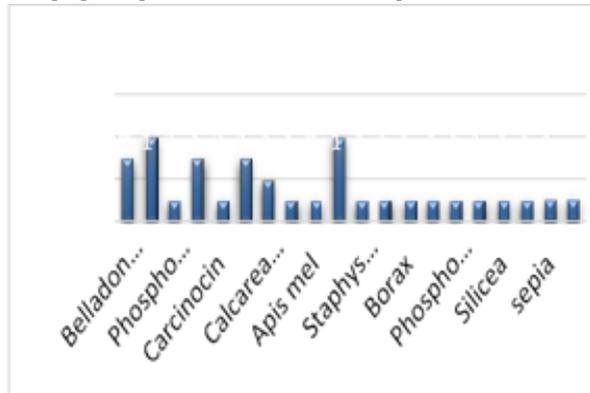


Figure 2: Prevalence According To Gender

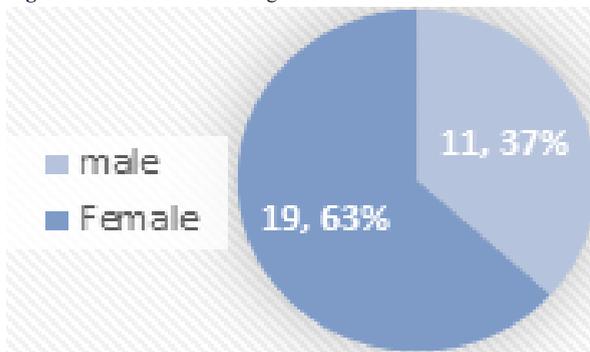


Figure 2: Prevalence According to Gender



Figure 3: Result of Cases Under Study

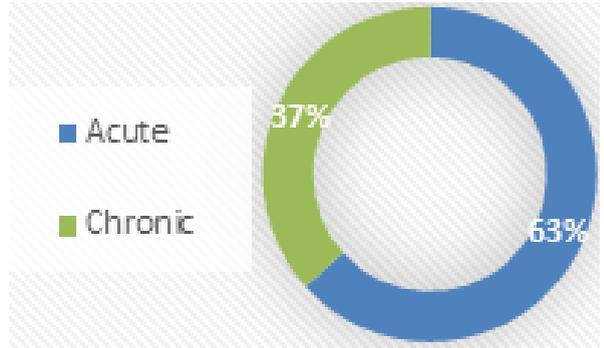


Figure 4: Prevalence according to diagnosis (Types)

RESULT

The study evaluated the role of individualized homeopathic medicines in managing pediatric urinary tract infections (UTIs).

Primary Objective:

To assess the efficacy of homeopathic medicines in treating pediatric UTIs. Out of 30 enrolled cases, 29 were analyzed; 28 children (96.6%) showed complete recovery (uUTI score = 0), and 1 (3.4%) showed partial improvement. The calculated t-value (23.23) was significantly higher than the table value (2.045, p < 0.05), confirming that homeopathic medicines significantly reduced the severity and recurrence of UTIs in children.

Secondary Objectives:

- (a) The most frequently indicated remedies were Cantharis, Lycopodium, Belladonna, Pulsatilla, Calcarea carbonica, and Ignatia.
- (b) In 11 children with recurrent UTIs, both frequency and severity of episodes markedly decreased, with many remaining symptom-free during follow-up. Overall, individualized homeopathic treatment was effective in both acute management and long-term prevention of pediatric UTIs.

DISCUSSION

LEARNING EXPERIENCE

All patients showed improvement post-treatment, with a consistent reduction in pus cell count. In the majority of cases, the post-treatment pus cell count ranged between 1–3/hpf, which falls within the normal or near-normal range.

This demonstrates that the homeopathic intervention was effective in resolving the infection and reducing the inflammatory response in the urinary tract. The inclusion of urine examination reports (before and after treatment) provided clinical and diagnostic validation of symptomatic improvement and confirmed the resolution of infection in most cases.

The detailed case-taking process also enhanced awareness of mental and general symptoms, which are crucial in homeopathic prescription, especially in paediatric cases.

Difficulties Faced

Maintaining causes such as poor perineal hygiene, low fluid intake, and improper toilet training often contributed to infection recurrence and complicated case management.

Extracting mental/emotional symptoms in very young children (especially under 5 years) was challenging due to limited communication. In some cases, parental non-adherence to advice regarding hygiene, hydration, and proper voiding habits affected the speed of recovery or led to relapse.

LIMITATIONS

A control group or comparison with other therapeutic systems (e.g., antibiotics or placebo) was not included, which would have allowed for more robust comparative assessment of treatment efficacy.

The sample size, though meaningful, was limited to 30 cases, and follow-up was mainly short-term. A longer follow-up would provide insight into the recurrence prevention potential of homeopathy.

Future Scope Of This Study

A randomized controlled trial (RCT) comparing homoeopathy vs conventional treatment (or placebo) could be conducted to further substantiate homoeopathy's efficacy in paediatric UTIs.

Future studies can focus on long-term follow-up of chronic or recurrent UTI cases to evaluate sustained effects and relapse rates.

CONCLUSION

Homoeopathic medicines significantly reduce the severity of symptoms in urinary tract infections and also help in reducing the recurrence of chronic urinary tract infections in the pediatric age group.

Conflicts Of Interest

There are no conflicts of interest.

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