BANGSHIL IN URINARY TRACT INFECTION

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INTRODUCTION

URINARY tract infection is a world-wide problem and is prevalent in both sexes irrespective of race, caste or creed. Large number of patients attend either the Out patient Dept. of Hospitals or are treated in private clinics and advanced cases are always hospitalised where facilities exist. For the treatment of urinary tract infection, there are plenty of drugs but the problems of drug dependence and drug resistance are ever present, as also of toxic effects in long term use which this disease frequently requires. Besides these problems, recurrences pose a continuous threat. While urinary tract infection may be either primary or secondary with specific cause, the presence of larger number of cases with definite urinary symptoms but without any specific cause, found even after full investigations, poses another perplexing problem.

SELECTION OF DRUG

Out of the many drugs available in treating urinary tract infection, after reviewing the drug cost, side effects, after effects, allergy, drug resistance, toxicity in long term use and taking into account all other relevant factors, we decided Bangshil* as the drug best suited for our clinical trial. The work of previous workers, Anjaneyulu et al.[2] Bapat[4], Lohokare[6], Shah[10] and others in this field who have reported beneficial effects of Bangshil without any untowards effects, prompted us to undertake clinical trial of this drug at our own Hospital.

Bangshil is an Ayurvedic product described as beneficial in burning micturition and other micturition troubles, urethritis, cystitis, prostatitis, etc., either specific or nonspecific.

Each tablet of Bangshil contains:

Shilajit (Asphaltum)	60 mg
Guggulu (Balsamodendron Mukul)	40 mg
Svarnamakshik Bhasma (Ferri sulphuratum)	30 mg
Kasis Bhasma (iron Bhasma)	60 mg
Vanslochan (Bambusa arundinaecia)	12 mg
Bang Bhasma (Tin Bhasma)	80 mg
Sandalwood oil (Chandan)	5 mg
Chandraprabha Co.	168 mg

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These drugs are described to act synergistically as urinary antiseptic, anti-inflammatory, antibacterial, with diuretic, astringent, cooling and healing properties. Bangshil is said to have detoxicating action and is also said to increase body resistance to infection.

MATERIAL AND METHODS

Sixty patients have urinary complaints that attended Out-patient Dept., or were admitted as Indoor patients of the Civil Hospital, Ahmedabad, during 1976, were selected at random for this clinical trial. However, the majority of them were from the Out-patient Dept. The study included both male and female patients. Complete history was recorded in a specially prepared research pro forma. Urine analysis, urine culture, plain X ray KUB. Cystoscopy, I.V.P. were done in all the cases before starting the clinical trial. Bangshil was given for three weeks. Urine analysis and urine culture were repeated once a week for three weeks. Results, subjective and objective, were recorded once a week. Final results were evaluated after the trial period of three weeks. Out of the total of 60 patients, 8 cases could not be followed for three week (including those who were known to be drug defaulters) and as such these were excluded from final assessment of results.

AGE GROUPS

There were 39 males and 21 females in our study, approximately forming a ratio of 2:1. The largest number of patients belonged to the age-group of 21-30 years, forming 45.0% and the next largest one belonged to the age group of 31-40 years, forming 20.0%. The details are shown in Table I.

Table I
Age Groups

Age Groups	Male	Female	Total	%
10-20 Years	–	2	2	3.3%
21-30 Years	20	7	27	45.0%
31-40 Years	5	7	12	20.0%
41-50 Years	5	5	10	16.7%
51-60 Years	5	–	5	8.4%
61-70 Years	2	–	2	3.3%
Above 70 Years	2	–	2	3.3%
Total	39	21	60	100.0%
Percentage	65	35.0%		100.0%

SYMPTOMS

57 out of 60 patients (95.0%) had burning micturition, and this was the most common symptom. Each patient suffered from more than one symptom. Frequency of micturition was present in 83.3%, Pain in hypogastrium in 71.7%, associated fever in 56.7%, Haematuria in 11.7%, difficulty in micturition in 8.3%, and Chyluria in 3.3%. There was no case of discharge per urethra in this series. The mean number of symptoms per patient was 3.3. The details are shown in Table II.

Table II
Symptoms. (Each Patient had more than one symptom) N = 60

Symptom	No.	%
Burning micturition	57	95.0%
Frequency of micturition	50	83.3%
Pain in hypogastrium	43	71.7%
Associated fever	34	56.7%
Haematuria	7	11.7%
Difficulty in micturition	5	8.3%
Chyluria	2	3.3%
Discharge per urethra	–	–
Mean Symptoms per patient	3.3	–

URINE ANALYSIS

Urine analysis was done in all the 60 patients. Albumin was present in 50 patients (83.3%), Pus cells in 88.3%, Epithelial cells in 43.3% and RBCs in 23.3%. There were 2 cases of nephrotic syndrome and 2 cases of Koch's Kidney. The details are given in Table III.

Table III
Urine Analysis (N = 60)

Finding	No. of pts.	%
Albumin: Trace:	46	76.7%
Nephrotic Syndroms +++ :	2	3.3%
Hydronephrosis with Koch's kidney++:	2	3.3%
Pus cells:	53	88.3%
Epithelial cells:	26	43.3%
RBCS:	14	23.3%
Red-Cell casts:	2	3.3%
Granular casts:	–	–
Hyaline casts:	–	–

URINE CULTURE

Urine culture was done in all the 60 patients. Culture was positive in 91.7% and negative in 8.3%.Culture for AFB was negative. The details are given in Table IV.

Table IV
Urine Culture

Culture	Positive	%	Negative	%
60	55	91.70%	5	8.3%

ORGANISM FOUND IN CULTURE

Among the total of 60 patients whose urine culture was done. 55 patients were positive and 5 patients were negative. Of these 55 patients the majority of patients, namely 41 (74.6%) had E. Coli, 12.7% S. Aureus, 9.1% B. Proteus and 3.6% B. Pyonyecius. Pseudomonas were not seen. The details are given in Table V.

TABLE-V
Organisms on culture

Organism	No. of pts.	%
E. Coli	41	74.6%
S. Aureus	7	12.7%
B. Proteus	5	9.1%
B. Pyonyecius	2	3.6%
Pseudomonas	–	–
Total	55	100.0%

OTHER INVESTIGATIONS

X-ray plain KUB was normal in 91.7%. 5 patients had stone (ureteric renal). Cystoscopy was normal in 56 patients. 2 patients showed chylus reflex in Rt. Ureteric orifice and 2 patients showed Koch's bladder. IVP was normal in 96.7%. 2 cases revealed hydronephrosis. The details are given in Table VI.

TABLE-VI
Other Investigations

	No. of pts.	Percentage
X-RAY PLAIN (KUB)		
Normal:	55	91.7%
Stone (Ureteric renal):	5	8.3%
CYSTOSCOPY		
Normal:	56	93.4%
Chylus reflex Rt.:	2	3.3%
Ureteric orifice Koch's bladder:	2	3.3%
IVP		
Normal:	58	96.7%
Hydronephrosis:	2	3.3%

BANGSHIL REGIMEN

Bangshil was given 2 tabs. three times a day for three weeks. It may be interesting to note that among these 60 patients under Bangshil trial, 16 had taken prior treatment without improvement, as follows:

Ampicillin:	1 week	4 patients
Chloramphenical:	5 days	4 patients
Furadantin:	1 week	2 patients
Mendalamine:	1 week	4 patients
Septran:	1 week	2 patients
Total		16 patients

RESULTS: Symptoms

Out of the total of 60 patients, only 52 patients could be followed. The improvement was Good in 88.0% of cases of burning micturition, 95.5% in frequency of micturition, 86.2% in associated fever, 100.0% in the difficulty in micturition and 56.8% in pain in hypogastrium. The 2 cases of Chyluria showed only Fair improvement. Only the 6 cases of haematuria did not show satisfactory response: Fair 2 cases and poor 4 cases. The details are shown in Table VII.

TABLE VII
Results of Bangshil therapy: Symptoms (N = 52)

Symptom	No. of cases	Good	%	Fair	%	Poor	%
Burning micturition:	50	44	88.0%	4	8.0%	2	4.0%
Frequency of micturition:	44	42	95.5%	–	–	2	4.5%
Pain in hypogastrium:	37	21	56.8%	10	27.0%	6	16.2%
Associated fever:	29	25	86.2%	4	13.8%	–	–
Haematuria:	6	–	–	2	33.3%	4	66.7%
Difficulty in micturition:	4	4	100.0%	–	–	–	–
Chyluria:	2	–	–	2	100.0%	–	–
Total:	172	136	79.1%	22	12.8%	14	8.1%

RESULTS OF BANGSHIL THERAPY: Urine analysis

Out of 60 patients who were investigated before commencing the treatment, only 52 could be followed. Though urine analysis was made once a week for three weeks during Bangshil treatment, and their records maintained, only the results at the end of Bangshil therapy of three weeks are discussed for brevity. Those five cases of stone (ureteric renal) were advised operative treatment.

In all those 40 cases where albumin trace was present, it disappeared completely after Bangshil therapy. Pus cells also disappeared after treatment. There was no improvement in 2 cases of nephrotic syndrome and 2 cases of Koch's kidney. RBCs disappeared in 10 cases out of 12. In all the 23 cases where epithelial cells were present, repeat urine analysis was negative. Red cell casts disappeared in one case and persisted in another. On the whole there was improvement in 94.5% and no improvement only in 5.5% of cases. The details are given in Table VIII.

TABLE-VIII
Results: Urine analysis (N = 52)

Examination (before treatment)	Total	Negative (Improvement)	%	Positive (Improvement)	%
Albumin: Trace:	40	40	100.0%	–	–
Nephrotic Syndroms :	2	–	–	2	100.0%
Hydronephrosis with Koch's kidney++:	2	–	–	2	100.0%
RBCS:	12	10	83.3%	2	16.7%
Pus cells:	46	46	100.0%	–	–
Epithelial cells:	23	23	100.0%	–	–
Red-Cell casts:	2	1	50.0%	1	50.0%
Total:	127	120	94.5%	7	5.5%

Out of 55 cases whose culture was positive before treatment, only 48 cases could be followed up. With Bangshil treatment S. Aureus, B. Proteus, Pyonyeceus, were completely negative. Only 6 cases (16.7%) out of 36 cases of E. Coli were resistant. On the whole, urine culture showed 87.5% good results (Negative culture) and only 12.5% were resistant. The details are given in Table IX.

TABLE-IX
Results of Bangshil therapy: Culture

Organism	No. before treatment	Negative (after treatment improve)	%	Positive (after treatment) No. imp.	%
E. Coli	36	30	83.3%	6	16.7%
S. Aureus	6	6	100%	–	–
B. Proteus	4	4	100%	–	–
B. Pyonyeceus	2	2	100%	–	–
Total	48	42	87.5%	6	12.5%

OVERALL RESPONSE

Response to Bangshil therapy was good in regard to Symptoms, 79.1%, Urine analysis. 94.5% and urine culture, 87.5. The mean improvement was good in 87.0%, fair in 4.3% and poor in 8.7%. The details are shown in Table X.

TABLE-X
Overall Response

Factor	Good	Fair	Poor
Symptoms:	79.1%	12.8%	8.1%
Urine Analysis:	94.5%	–	5.5%
Urine Culture:	87.5%	–	12.5%
Mean:	87.0%	4.3%	8.7%

DISCUSSION

Patients showed subjective and objective improvement after treatment with Bangshil. It is interesting to note that 16 patients had undergone prior treatment with ampicillin, chloramphenicol, furadantin, mendalamins or septran and there was no subjective and objective improvement. In our study, we found that Bangshil is a safe and efficacious drug suitable for routine use in urinary tract infections or non-specific urinary complaints. Improvement was noticed from week to week consistently and even after a week's treatment with Bangshil, patients felt much relief subjectively. It was also observed that the drug response was not affected by the difference in age groups or sex.

Bangshil is found to be not only non-toxic but also having detoxicating action and it builds up body resistance. It can safely be used for longer duration which is absolutely necessary in resistant and recurrent infection and/or symptoms. Though ours is a small series, we did not come across any toxic or side effects with the use of Bangshil.

SUMMARY

60 patients with urinary complaints that attended the Civil Hospital, Ahmedabad, majority of them from the OPD and a few from the Indoor patients, were selected at random for clinical trial with Bangshil, an Ayurvedic remedy. Urine analysis, urine culture, plain X ray KUB, Culture for AFB, IVP and Cystoscopy were done in all the cases before starting Bangshil. Urine analysis and Urine Culture were repeated once a week for three weeks) after starting Bangshil treatment. The trial period was of three weeks duration. This study had shown that there was subjective and objective relief of 87.0% with Bangshil therapy. No toxic or side effects were observed. Bangshil is cheaper and effective and can be used for a long term without toxic or side effects, where necessary, such as in chronic resistant and recurrent infection and symptoms.

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ALARSIN
Pharmaceuticals

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