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Urinary Tract Infection In Homoeopathic Practice

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Introduction

Urinary tract infections are amongst the commonest bacterial infection – may be next to only that of upper respiratory tract. The gravity of urinary tract infection is understood better when the natural history of the diseases process is taken into consideration.

Urinary tract infection microbiologically exists when pathogenic microorganisms are detected in the urine in excess. To distinguish between contamination during or after collection of urine and presence of bacteria in bladder urine, Kass (1965) introduced the term of significant bacteriuria which means count of 10^5 or more bacteria per millilitre, group from a properly collected mid-stream urine sample.

The existence of its frequent asymptomatic nature in apparently healthy populations, the lack of successful response to any system of chemotherapy once a chronic process is established the morbidity and mortality due to chronic upper urinary tract infection having remained the same despite all the powerful accurate drugs makes it a formidable disease process.

About 5% of females between the ages of 16 to 65 show significant bacteriuria as compared to 0.5% of males in the same age group (Kass, 1965 & Freedman et al, 1965).

Waters (1969) found that nearly 50% of an unselected group of women in South Wales had experienced dysuria at sometimes during their lives. In old age urinary tract infections assumes enormous proportion. As many as 15% of elderly women and almost equal number of males due to prostatic involvement are affected by this (Kass et al, 1965). Depending upon socio-economic status, urinary infections are detected in 2 to 8% of pregnant women (Stamm and Turck, 1980). The incidence of acute pyelonephritis developing during pregnancy in case of asymptomatic bacteriuria is variable from 30% (Kass, 1960) to 67% (Little et al, 1966). It is also very common in Diabetes Mellitus, neurogenic bladder dysfunction (78% in non-traumatic paraplegia had urinary tract infection as stated by Ross J. C. et al, 1964). Obstructive uropathy anatomical abnormalities of the urinary tract (27% of children of higher age group as studied by Sonellie and her co-workers, 1964). The incidence also increases with previous renal diseases.

Once chronicity of urinary tract infection is established the morbidity due to it, is very great. Apart from general ill health and economic loss & mental strain, it can also lead to secondary hypertension (10–20% of all cases of hypertension, in a study by Kass et al, 1965) were found to be having pyelonephritis). Half of

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all gm-ve septicaemia originates in the urinary tract. Fried M.A. & Vosti K. L. (1968) could trace gm-ve septicaemia in some 75% of cases attributable to urinary tract infection. Chronic pyelonephritis is said to account for 20% of cases of End-stage renal failure admitted European Dialysis and Transplant Units (Persons F.H. et al, 1972) and figure in children may be as high as 30% (Habib R. et al, 1973). There is also an association between urinary tract infection and pre-eclamptic toxemia, premature birth and low birth weight, increased perinatal mortality (Kass, 1960). It also precipitates Diabetic Ketoacidosis.

The treatment of urinary tract infection is more rational in allopathy when it is prescribed on culture & sensitivity report of urine. But despite effective treatment for ideal duration, there may be recurrence in the form of relapse, reinfection and super-infection. The recurrence is common when there is especially obstructive uropathy leading to residual urine or some anatomical abnormality of urinary tract (Stamm and Turck, 1980).

So considering the wide and far-reaching effects of urinary tract infection on morbidity and mortality in the community, the general acceptance of the concept that detection of asymptomatic bacteriuria and eradication of infection in both symptomatic and asymptomatic cases are important so as to prevent the chronicity of the condition and its effects.

As Homoeopathic subtle philosophy advocates high of therapeutic application of Homoeopathy in the treatment of urinary tract infection in general which are observed from case reports of various journals and periodicals.

Not only, on a cursory look but also on practice it is observed that the scope of Homoeopathy in the treatment of urinary tract infections is very wide.

Unfortunately a systemic statistical data is wanting in Homeopathy to convince the scientific world that Homoeopathy has positive role in the treatment of U.T.I which is a retractable disease with the conventional system of treatment because despite repeated anti microbial drugs it is not amenable with the treatment and relapse is inevitable. Moreover treatment is costly and complications are very grievous and can lead chronic renal failure and patient may resort to dialysis and kidney transplant etc.

Hence a study is required for following reasons:

1. To limit the period of suffering.
2. To minimize the severity of suffering.
3. To arouse the immunity of the patient in order to prevent re-infection.
4. To avoid dialysis and kidney transplantation.
5. To reduce the cost of treatment.

Hence a study was under taken with following aims and objectives to unfurl the scope of Homoeopathy in the treatment of urinary tract infection.

Aims and Objectives

1. To observe the action of different Homeopathic medicine on U.T.I. diseases with the help of Repertories..
2. To find out the most effective drugs.
3. To ascertain the reliable indications of the effective drugs.

4. To find out the most suitable potency
5. To determine the repetitions schedules.
6. To study the incidence of U.T.I. in our hospital and the relationship to age, sex and social status, marital status, pregnancy and other associated conditions.
7. To find out the percentage of upper and lower U.T.I. in the given population.

Method and Materials

The present study includes the cases of U.T.I. either symptomatic or asymptomatic who were admitted to the O.P.D. and I.P.D. of Dr A.C. Homeopathic Medical College and Hospital during the period from 2000 to 2003.

A prospective controlled study was conducted during the period of 60 patients of varying ages, sexes, different occupations, socio-economic status, marital status etc.

Research Design :

(1) Selection of Research Strategies

Among the patients admitted to Dr.AC.H.M.C & H during above mentioned period, whose ever fitted to any of the following diagnostic criteria were taken up for the primary screening for detection of U.T.I.

(2) Selection of Research Setting

Diagnostic Criteria

(i) Inclusion

(a) Signs and Symptoms

- Fever
- Nausea and Vomiting
- Dysuria

- Frequency of Micturition
- Haematuria
- Pain in loin/back/suprapubic area
- Retention of urine

(b) Investigation

- Pyuria-morethan 5 puscells per HPF (stadusfold 1962-63)
- Bacterial count more than 100,000 per milliliter of urine

On quantitative urine culture (Kass 1966, Brumfit 1965, Ambrose et al 1965)

- Urea / Creatinine

(a) Microscopic urine examination will reveal pus cells is than 5 per HPF.

(b) Bacterial count less than 100,000 per ml of urine.

(3) Sampling

(a) Sample Size :

In view of the design of this study. The sample size was set at 30 cases. (Mahajan 1999)

(c) Sampling Method – simple random method was adopted for selection of the case.

(4) Use of Controls

The above diagnostic criteria were adopted for the use of controls too.

(5) Study of Instruments

To minimize, interviewer and respondent bias a standard case recording proforma was

prepared which is Annexed (Vide Appendix – A). Following laboratory tests were done.

(1) Pyuria :

More than 5 pus cells per high power field of uncentrifuged specimen of urine (Stanfeld, 1962, 1963)

(2) a) Bacterial count of urine :

More than 100,000 per milliliter of urine on quantitative urine culture was taken as definite indication of urinary tract infection (Kass, 1960, Brumfitt, 1965; Ambrose et al, 1965), even if they were not having any symptom or sign of the infection.

(b) The cases who had definite signs and symptoms of urinary tract infection and quantitative bacteria count 10^4 to 10^5 per milliliter of urine were taken as significant bacteriuria (Asscher, 1980). The cases having less than 10,000 colony count per ml of urine were considered contamination. Then the selected cases of urinary tract infection were subjected to further detailed study.

Detailed method of study of the selected cases :-

(1) A careful detailed history was taken as to the specific symptoms, duration of illness, past history of urinary tract, presence of any predisposing factors, marital status were properly evaluated by clinical examination of all systems. Then the following laboratory tests were done.

(2) Urine analysis – In all cases urine analysis was done.

- (i) **Collection of urine** – For routine and microscopic and bacteriological study midstream urine samples were collected in a sterile container, after cleaning the external genitalia with

soap and water. In cases of male, after the stream of urine was well established, a clean-catch, mid-stream sample of urine was taken. In cases of female the perineum was washed with soap and water. While the labia was held separated, a mid-stream specimen of urine was collected as before. In cases of retention, catheterized specimen was taken by using a sterilised catheter and midstream fresh sample of urine was collected in a sterile glass tube. The urine sample was subjected to bacteriological study within one hour. In case of delay, the sample was preserved at 4 degree centigrade.

- (i) **Chemical Examination :** -Colour, Reaction, specific gravity were recorded.

(ii) Chemical Examination :-

Hest test, benzidine test and Benedict's qualitative tests were done to find out the presence of albumin, blood and sugar respectively.

(iii) Microscopic Examination :-

One drop of uncentrifuged deposit was examined under HPF

(iv) Bacteriological Examination :-

Quantitative urine culture :- Through quantitative urine culture is most accurately done by classic dilution pour plate method, yet this technique is very expensive in relation to time, personal and materials for use in clinical laboratory. So, a simple rapid and reliable method, devised by Paul.

D. Hoeprich (1960) was used in the present study in all cases.

Two standard volume calibrated bacteriologic loops were used to prepare quantitative streak plate culture. To delimit 0.01 millilitre of urine, a 4 millilitre inside diameter loop and to deliver 0.001 millilitre of urine, a 1.45 millilitre inside diameter loop were used. The loops were flamed and then cooled. With a 4 millimetres inside diameter loop 0.01 millilitre of urine was transferred and applied to one half of the nutrient agar petriplate labeled 10². Complete and even transfer of urine inoculum was accomplished by streaking the entire half plate four times parallel to the diameter and at right angles to the diameter, along 45 degree diagonals. The remaining half of the plate was also inoculated similarly with 0.001 millilitre of urine transferred by the 1.45 millimeter inside diameter loop.

The plates were inoculated at 37° overnight. On the basis of the number of colony developed, the degree of bacteriuria was noted as below 10,000 between 10,000 to 100,000 or more than 100,000 bacteria per milliliter of urine. The test was repeated in cases who had colony count between 10,00 to 100,000 per milliliter of urine.

If no growth occurred in 24 hours, the plates were kept in the incubator for another 24 hours. If still no growth occurred it was noted as sterile.

Isolation and Identification of organism :-

A large loopful of the uncentrifuged urine specimen was also inoculated into blood agar and Teopol agar plate and after overnight or forty-eight hours incubations, the colonies were identified from their colonial characters,

motility, reaction in stained smears, fermentation of sugars, urease activity and other standard biochemical properties.

6. Short Description For Collection Of Data Case Recording :

One standard case recording format was prepared for maintaining the clinical profiles of the patients which incorporated the bio-data as well as other specific information about the patients including their age, sex, marital status, occupation, habitat habits, education / socio-economic status, addictions, , their presenting features from four dimensions location (including extension of pain) /sensation,/ modalities/concomitants and their mode of onset and ,progress, past history including injuries, family / personal, obstetrical and gynecological / treatment histories; physical / mental generalities etc.

The routine examination of blood was done in each case such as D.C., T.L.C., E.S.R., haemoglobin etc. Each patient was advised for urine routine / microscopic examination urine culture, x-ray & ultrasound of pelvic region. Some of the patients although advised for ultrasound & x-ray could not produce owing to financial grounds or otherwise.

Categorization of Patients :-

The patients were categorized into 3 groups on the base of type of medicine administrated to them which are as follow;

Group I. Patients were administered drug evolved on the basis of repertorisation

Group II (Control group) Patients administered with placebo

Administration of Medicine :

After repertorisation with respective repertories the drug evolved in the panel on the

basis of totality of symptoms a similimum was prescribed to each patient. Out of 60 patients suffering from U.T.I. treated during the period, 30 were given drugs after repertorisation in varied repertories (Test Group). Other 30 were prescribed with placebo (Control Group).

Choice of Potency:-

- (a) Indicated medicines were administered in centesimal (30, 200, & 1M) & 50 millesimal potencies.
- (b) Selection of potencies, dose and administration of medicines were done on the guidelines prescribed by Hahnemann in his organon of Medicine, vide Aphorisms 272, 292, 248 (along with its foot note), 269-270 (along with its foot notes) & 272-273; by Roberts vide chapter XIII of the book, "The Principles and Art of Cure by Homeopathy" (1976, PP 113-122).

Repetition Schedule :

Indicated medicines were given in single or in repeated doses on the basis of the principles laid down by Hahnemann in his organon of Medicine Vide Aphorisms 272, 292, Kent in his lecture XXXV and XXXVI of "Lectures on Homeopathic Philosophy" (1967, PP 224-241). Rebert in the chapter - XIV, XVI of "The principles & Art of Cure by Homeopathy" (1967, PP 124-134, 144-149).

Follow Up :

After prescribing drugs & providing other instructions, the patients were asked to report at suitable intervals (Preferably) after every 2 wks in the O.P.D. and when required they were admitted in the I.P.D for proper follow up.

At each unit a detail follow up record were maintained as regards improvement or worsening of each symptoms and subsequent drugs were prescribed.

Assessment of Result :

It was seen on the light of objective fixed for the study under the protocol formulated during the implementation of the project. It is difficult to formulate a definite assessment criteria, in of view pathogenesis and unpredictable course of the disease. However the cases were assessed in terms of their presenting symptom physical signs and pathological findings.

Administration of Medicines :-

Oral route was chosen for the administration of medicine.

7. Short description for Analysis of data

The results were documented after the administration of medicine as per Repertorial totality. The parameters fixed for documentation were as follows;

(A) Positive Responses

Marked improvement

Disappearance of signs and symptoms for more than 1 year along with disappearance of all the pathological findings mentioned in the diagnostic criteria.

Moderate Improvement

Disappearance of signs and symptoms for less than 1 year along with disappearance of all the pathological findings mentioned in the diagnostic criteria.

Mild Improvement

Disappearance of signs and symptoms or pathological findings, either of two .

(B) Negative Responses

- No improvement
- Pt. did not improve with indicated medicine although prescribed for sufficient of period of time
- Aggravation - Condition of the pt. was increased during course of treatment.
- Dropped out - The pt. did not stick to the treatment for sufficient period of time.

For collection of data from various age groups following types were made :-

0-10, 11-20, 21-30, 31-40, 41-50, 51-60
61 to above

For habitat : It was made into two types :

- (a) Urban
- (b) Rural

For occupation it was made into two types :

- (a) Sedentary - who has no physical work
- (b) Hard work who has physical work

For body built it was made into three types :

- (a) Thin (b) Moderate (c) Obese

For Duration It was made into two types :

- (a) < four weeks
- (b) > four weeks

For socio-economic status :

Low - Annual income < 10,000

Average - Annual Income ranging from more than 10,000 to 100,000

High - Annual income more than 100,000

For collection of repetition schedule results following parameter were fixed :

Single Dose - prescribed indicated drug (s) in single dose and allowing patient wait for sufficient period of time.

Repeated Dose - Indicated drugs were administered daily.

Observations

In the present study 60 patients were clinically having UTI infection were subjected to treatment of urine microscopic examination and quantitative bacteriological examination

TABLE - 1
AGE AND SEX DISTRIBUTION

Age group	Male		Female		Total	
	No. of Cases	Percentage	No. of Cases	Percentage	No. of Cases	Percentage
0-10	2	6.67%	3	10%	5	8.35%
11-20	0	0%	3	10%	3	5%
21-30	02	6.67%	11	36.68%	13	21.66%
31-40	04	13.33%	9	30%	13	21.66%
41-50	012	40%	2	6.67%	14	23.34%
51-60	08	26.67%	0	6.67%	10	16.66%
60 above	02	6.67%	0	0	2	3.34%
Total	30	100%-	30		60	100%

TABLE - 2
HABITAT

HABITAT	NUMBER	PERCENTAGE
Urban	36	60%
Rural	24	40%
Total	60	100%

TABLE - 3
OCCUPATION

Occupation	Number	Percentage
Sedentary	42	70%
Hard Work	18	30%
Total	60	100%

TABLE - 4
BODY BUILT

Body Built	Number	Percentage
Thin	12	20%
Moderate	18	30%
Obese	30	50%
Total	60	100%

TABLE - 5
DURATION OF ILLNESS

Duration of illness	Number	Percentage
< 4 weeks	21	35%
> 4 weeks	39	65%
Total	60	100%
Total	60	100%

TABLE - 6
SOCIO-ECONOMIC STATUS

Socio-economic Status	Number	Percentage
Low	30	50%
Average	16	26.66%
High	14	23.34%
Total	60	100%

TABLE - 8
INCIDENCE OF DISEASE

Frequency of infection	Number	Percentage
1 st Time	42	70%
Relapse	18	30%
Total	60	100%

TABLE - 7
MARITAL STATUS

Marital Status	Male Number	Percentage	Female Number	Percentage	Total Number	Percentage
Married	22	73.34%	24	80%	46	76.67%
Unmarried	8	26.66%	6	20%	14	23.33%
Total	30	100%	30	100%	60	100%

TABLE - 9
INCIDENCE OF DIFFERENT PREDISPOSING FACTORS

Sl. No.	Predisposing factors	No. of Case	Percentage
1.	Diabetes mellitus	3	5%
2.	Pregnancy	5	8.3%
3.	Post operative cases	5	8.3%
4.	Puerperium	6	10%
5.	Gyneacological diseases (prolapse uterus / ca. cx. Leucorrhoea etc)	11	18.45%
6.	Enlarged prostate	9	15%
7.	Stricture Urethra	4	6.67%
8.	Urinary calculi	10	16.7%
9.	Others	7	11.7%
	TOTAL	60	100%

TABLE - 10
POSSIBLE CAUSE OF OBSTRUCTION TO THE FLOW OF URINE

Sl. No.	Cause of obstruction	Number	Percentage
1.	Enlarge Prostate	9	28.12%
2.	Neurogenic bladder (Paraplegic, hemiplegia)	10	31.25%
3.	Stricture Urethra	4	12.5%
4.	Uterine Prolapse	8	25%
5.	Ca cx	1	3.13%
	Total	32	100%

TABLE - 11
INCIDENCE OF URINARY FINDING

Urinary findings	Number of cases	Percentage
Pyuria	60	100%
Haematuria	16	27%
Proteinuria	14	24%
Glycosuria	3	5%
WBC Count	7	11%
Crystals	10	16%

TABLE - 12
POSITIVE UREA & CREATININE

S. Urea & Creatinine high	Number of cases	Percentage
S. Creatinine	9	15%
S. Urea	7	11.6%
Total	16	

TABLE - 13
MAJOR CLINICAL SYMPTOMS

Presenting symptoms	Number of cases	Percentage
Fever	36	60%
Dysuria	30	50%
Increased frequency	28	46.6%
Microscopic haematuria	4	6.3%
Retention of Urine	1	1.4%
Pain in abdomen	32	54%
Nausea & vomiting	4	6.5%

TABLE - 14
RESULTS OF DRUG RESPONSE

Groups	Number of Pt treated			(+)ive Response		(-) tive		
	Total	Marked	Moderate	Mild	No amel.	Aggravation		
Dropped								
Test group	30	12	05	3	2	1	2	5
Control group	30	2	3	1	9	7	8	24
TOTAL 60	14	8	4	11	8	10	29	

TABLE - 15
RESULTS OF VARIOUS SCALES

Types of scales	No. of cases cured	No. of cases not cured	Total no. of pt. Treated
50 millesimal	0	0	0
Centesimal	25	5	30

TABLE - 16
RESULTS OF VARIOUS REPETITION SCHEDULES

Types of repetition	No. of cases cured	No. of cases not cured	Total no. of pt. Treated
Single dose	22	12	34
Repeated dose	09	17	26
TOTAL	31	29	60

TABLE - 17
RESULTS OF VARIOUS AGE GROUPS

Age Groups	No. of cases cured	No. of cases not cured
0-10	1	0
11-20	1	0
21-30	5	2
31-40	7	2
41-50	7	1
51-60	3	2
61 & Above	1	0

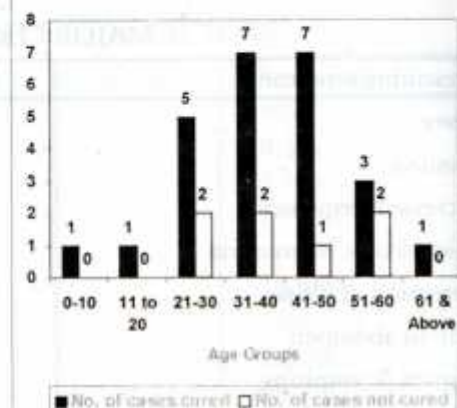


TABLE - 18
EFFECT ON MALE AND FEMALE

Types of Sex	No. of Cases Cured	No. of cases not Cured	Total no. of Cases
Male	15	15	30
Female	16	14	30
Total	31	29	60

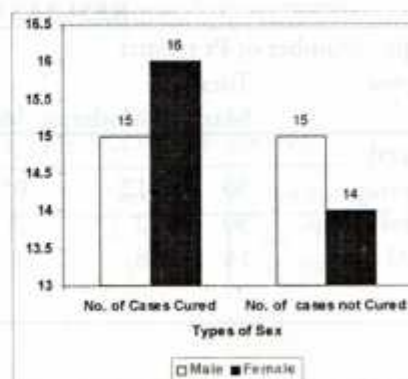


TABLE - 19
FREQUENCY TABLE OF DRUGS OF CURED CASES

Name of Drugs	No. of Cases Cured
Sycotic-co.	5
Sulphur	5
Pyrogen	3
Thuja Occ.	3
Merc sol.	3
Ars alb.	3
Others	4

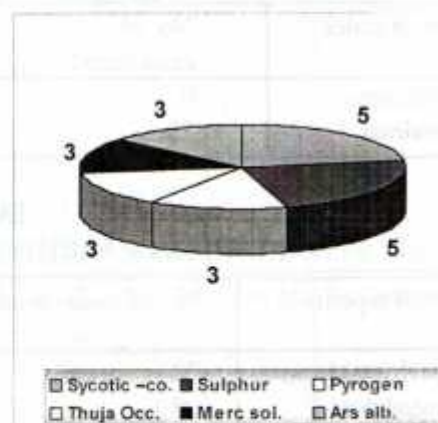


TABLE - 20
RELIABLE INDICATIONS OF DRUGS CURED THE CASES

Symptom of Sycotic-co	Frequency of appearance
Irritability	5
Swecting of head	4
Fear of being alone	4
Anaemia	4
Dysuria	4
Albuminuria	4
Pyelitis	4
Cystitis	4
Urethritis	4
Frequency of mict.	4
Pain in loins	3
Fever	3
Puscell	3

Symptoms of Pyrogen	Frequency of appearance
Restlessness	3
Fever	3
Dysuria	3
Sweating does not >	3
Puscell	3
Haematuria	3
Frequency of mict.	3
Pain in back	3
Puerperal peritonitis	3
Pelvic cellulitis	3

Symptom of Merc sol.	Frequency of appearance
Salivation < might	3
Thirsty	3
Night agg.	3
Frequent mict.	3
Puscell	3
Burning mict. at the beginning	3
Fever	3
Perspiration does not give >	3

Symptoms of Ars. Alb.	Frequency of appearance
Restlessness	2
Chilly pt.	2
Thirst for small quantity of water	2
Desires warm food	2
Aversion sweet	2
Midnight agg.	2
Fever	2
Dysuria	2
Puscell	2

Symptom of Sulphur	Frequency of appearance
Untidy	5
Selfish	5
Desire Sweet	5
Ravenous appetite	5
Morning diarrhoea	5
Burning micturition	5
Frequent mict.	5
Pain in loins	5
Pus cell	5
Dysuria	5

Symptoms of Thuja occ.	Frequency of appearance
Dysuria	3
Frequency of mict.	3
Sudden urge for mict.	3
Puscell	3
Pain in back & Loin	3
Fever	3
Urethritis	3
Bacteriuria	3

Conclusion

From above datas/tables, it is envisaged that

(a) Homeopathic medicine do act curatively for combacting UTI and by prevents further complications which is proved by statistical data. This validates the scientificity of Homeopathic cure observed by many expressed in various journals and periodicals.

(b) Medicines frequently occurring among the curative drugs are polycrest live

- Sycotic-co
- Sulphur
- Pyrogen
- Thuja occ.
- Merc. sol.
- Ars. alb.

The therapeutic capabilities are dependent on mental generals, physical generals, characteristic particular, particulars and pathological symptoms too which constitute the "totality of symptoms" and is no other short cut route for Homeopathic prescription which has reconfirmed the master's observations.

Totality of symptoms means, the entire representation of drug and disease which enables the physician to individuals between the disease and remedy, it is not single characteristic symptoms but it means which gives us a clear idea about the nature of sickness and remedy".

From the study of reliable indications of drugs it is observed that for new symptoms at the level of pathological findings are documented apart from the symptoms already in the text books they are as follows :

Sycotic Co :-

- Albuminuria
- Pyelitis
- Cystitis
- Urethritis
- Pus cell in urine

Sulphur :-

- Pus cell in urine
- Bacteriuria

Pyrogen :-

- Haematuria
- Pueperal peritonitis
- Pelvic cellulitis
- Pus cell in urine

Thuja Occ. :-

- Urethritis
- Bacteriuria

Mere sol :-

- Puscell in urine

Ars alb :-

- Pus cell in urine

From the study of repetition schedule it is envisaged that single dose is more effective than repeated dose which validates the observation of earlier observers.

These are the contribution to the field of Homeopathy in particular but apart from this the paper has contributed for the medical science in general too. They are as follows :

Age & Sex :- It is more found in male from 41 to 60 years and in female between the age group of 21 to 40 years the child bearing period.

Habitant :- It is more found in urban population than rural.

Occupation : - It is more marked among the people who lead a sedentary life.

Body Built : - It is more common among obese individual.

Duration of illness :- The number of cases are more with > 4 weeks of illness. It indicates disease is mostly a chronic nature.

Socio-economic Status : - It is more vulnerable among low socio-economic groups.

Marital Status : - It is very widely seen among married than unmarried.

Predisposing factors : - Factors are gynaecological disease, enlarged prostate, puerperium, pregnancy, diabetes mellitus, urinary calculi etc.

Causes of obstruction :- Mainly they are BHP, Neurogenic, bladder, stricture urethra, uterine prolapse etc.

Major clinical symptoms are as follows: -

Fever, Dysuria, Increased frequency of micturition, Haematuria, Retention of urine, Pain in abdomen Nausea and Vomiting, Fatigue.

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