RESULTS

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31 patients with resistant chronic bacterial prostatitis were subjected to intraprostatic injection of antibiotics via transurethral route using a special needle through the diagnostic cystoscope.

The patients were divided into 2 groups according to the type of injected antibiotic:

* Group I: Injected by thiamphenicol only.
* Group II: Injected by gentamicin, amikacin or cefazolin according to culture and senstivity of E.P.S.
* Follow up the cases was at 2-3 weeks after injection and then regularly every month for 3-4 months at least and including:

  I subjective assessment.

  II objective assessment.
* According to subjective improvement, objective improvement and persistance of both improvements, average improvement percentage could be detected in each group and the patients were classified into 3 groups: good, fair, and poor.

A) THE PRESENT STUDY DEMONSTRATE THE FOLLOWING

I. Age

Table [1]: Shows the age groups of the selected 31 cases with chronic bacterial prostatitis:

Age in years	No. of patients	Percentage of total
20-30	12	38.7%
30-40	14	45.1%
40-50	3	9.6%
>50	2	6.4%

The mean age in the selected 31 patients was 32 years.

II. Marital Status

19 patients of the selected 31 cases were married i.e.: 61% of patients.

III. Lower Urinary Symptoms

1. Burning Micturation:

It was the commonest urinary symptom noticed with 28/31 patients (90-3%).

2. Difficulty of Micturation:

- This was the next common urinary symptom noticed with 15/31 patients (48.3%).

Table [2]: Shows number of patients complaining of the three characters of difficulty of micturation.

Difficulty	No. of patients	Percentage
To initiate	13	41.9%
To maintain	10	32.2%
To terminate	10	32.2%

N.B.: It was found that 6 cases of those 15 patients were complaining of the three characters of difficulty

3. Frequency

- This was found in 13 patients of the selected 31 patients (41%) with average diurnal/necturnal rate 12/5.
- Frequency was exaggerated with urgency in 29% of the cases [9 patients].

4. Abnormal Stream

- This was found in 12/31 patients (38.7%) in the form of inturrpted stream in 11 patients (35.4%), weak force of the stream in 10 patients (32.2%) and weak caliber of the stream in 8 patients (25.8%).
- Of those 12 patients, there were 6 patients (50%) suffered from the three types of abnormal stream.

5. Urethral discharge

- This was found in 7/31 patients (22.5%).
- The urethral discharge in most of those patients was semen like, whitish in colour and scanty. It may be just morning wetting of clothes or after micturation.

6. Haematuria

- There was haematuria in only 2 patients (6.4%).
- Haematuria in both was terminal painful and associated with bilharizial cystitis.

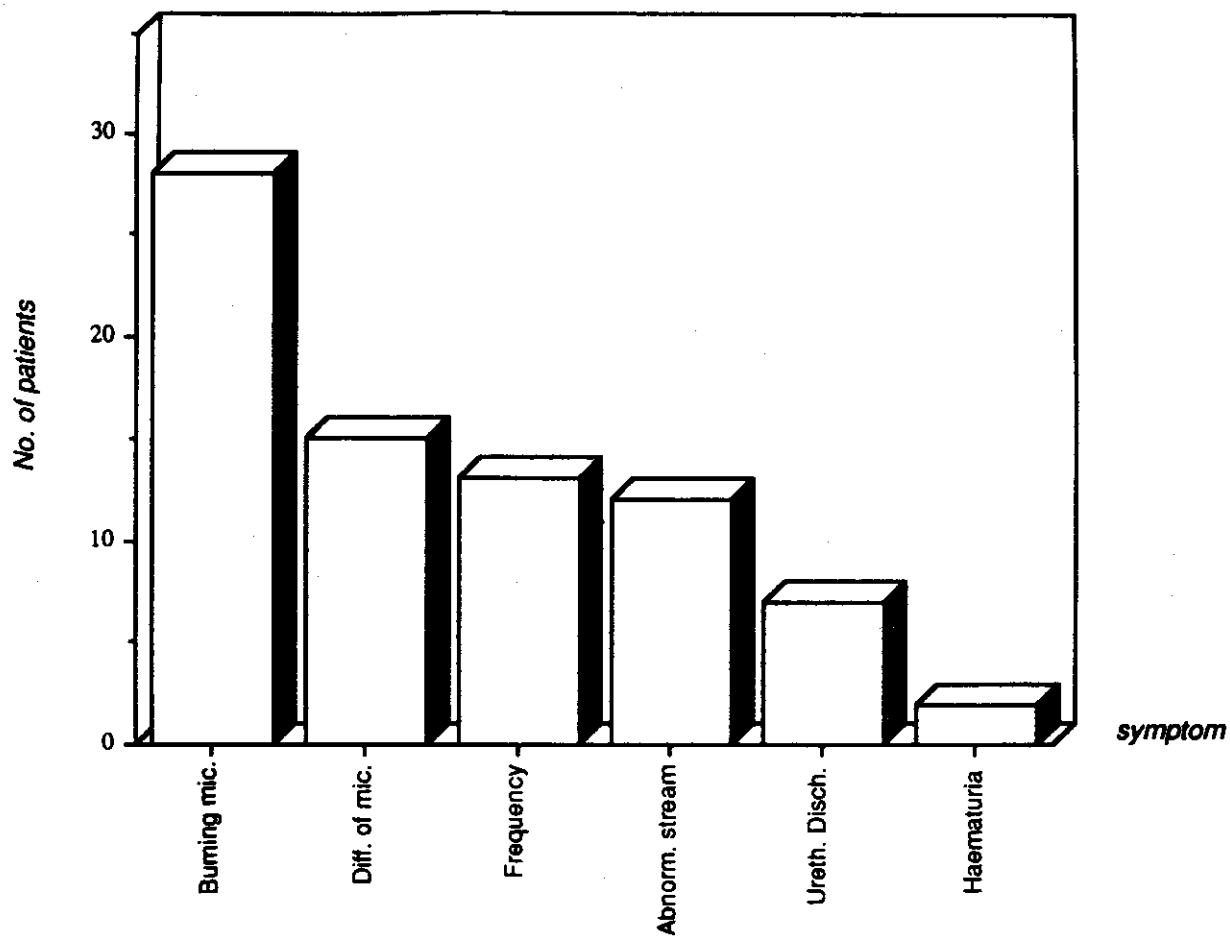

Fig. (11): Lower Urinary Symptoms in the selected 31 patients with chronic bacterial prostatitis

Table [3]: shows comparative study of number and percentage of different lower urinary symptoms of the selected 31 patients with chronic bacterial prostatitis

The Symptom	No. of patients	Percentage of total
Burning micturation	28	90.3%
Difficulty	15	48.3%
Frequency	13	41%
Abnormal stream	12	38.7%
Urethral discharge	7	22.5%
Haematuria	2	6.4%

N.B.: One patient may complaining of 2 or more urinary symptoms.

IV. Sexual Symptoms

- Of the 19 married patients of the selected 31 patients, 14 patients (73.6%) were suffering from sexual troubles.

Table [4]: Shows the different sexual symptoms in the 19 married patients with chronic bacterial prostatitis.

The Symptom	No. of patients	Percentage of total
- No symptom	5	26.3%
- Premature ejaculation	5	26.3%
- Weak erection	5	26.3%
- Post coital pain	3	15.7%
- Haemospermia	1	5.2%
Total	19	100%

V. Upper Urinary Symptoms

This was noticed with 8/31 patients (25.8%) in the form of dull aching loin pain either unilateral or bilateral with no reference.

VI. Other Painful Symptoms

Table [5]: Shows the painful symptoms in the selected 31 patients with chronic bacterial prostatitis

The Symptom	No. of patients	Percentage of total
- Suprapubic pain	10	32.2%
- Perineal heaviness	9	29%
- Low back pain	5	16.2%
- Groin pain	3	9.6%

VII. Past History

1. Past history of previous infections:
   - 22 patients were with past history of urinary tract infections [71%].
   - 3 patients [9.6%] were with past history of acute illness suspected to be acute prostatitis.
   - 17 patients were with past history of bilharizial infection [54.8%].
   - Past history of gonorrhoea in only one patient [3.2%].
   - One patient was with past history of acute epididymorchitis [3.2%].
2. Past history of medical treatment in all the selected 31 patients in the form of antimicrobial drugs [from trimethoprim-sulphamethoxazole to norfloxacine], antiinflammatory, analgesia and prostatic decongestant suppositories.
3. Past history of treatment by prostatic massage in 17 cases [54.8%].
   * Minimal response to treatment either by medical treatment or by prostatic massage was observed in all patients.

VIII. Examination

A) General Examination

Most of the selected 31 patients were of good health inspite of their restlessness and irritability.

B) Urologic Examination

1. Abdominal bimanual examination: Tender renal angle was found in 2 patients.
2. Examination of external genitalia:
   - The spermatic cord was thickened in 3 cases.
   - Hydocele was found in only one case.
   - Unilateral enlargement of testicle was found in only one patient.

This swelling was painless, firm, not tender, not hot and not red in colour. It was suspected to be chronic epididmyoorchitis.

c) Per Rectal Examination

* Mild to moderate enlargement of the prostate was found in 18 cases [58%] while the rest were of normal size.
* Consistency of the prostate in most patients was rubby or boggy while firmness of the prostate was found in only 3 cases [9.6%].
* The surface of the prostate was smooth with preserved both lateral and median sulci in all patients.
* Mild tenderness was observed in 11 cases of the selected 31 patients [35.4%].

IX. Laboratory Investigations

A) Urine Examination

Table [6]: shows the pus cell count/H.P.F. for urethral urine sample (VB1), bladder urine sample (VB2) and post prostatic massage urine sample (VB3)

	VB1		VB2		VB3	
No. of pus cell/H.P.F.	No. of patients	Percentage	No. of patients	Percentage	No. of patients	Percentage
0-5	21	84%	18	69.2%	8	30.7%
5-10	4	16%	8	30.7%	5	19.2%
>10	-	-	-	-	13	50%
Total	25	100%	26	100%	26	100%

B) Examination of Expressed Prostatic Secretions (E.P.S.)

1) Microscopic Examination of E.P.S.

- In addition to red cells and pus cells, there were many refractile comma shaped threads (Lethicin bodies).

Table [7]: Shows number of pus cells and red cells/H.P.F. in the E.P.S. of the selected 31 patients with chronic bacterial prostatitis.

No. of pus cells/H.P.F.	No. of patients	Percentage of total	No. of red cells/H.P.F.	No. of patients	Percentage of total
10-20	10	32.2%	0-5	19	61.2%
20-30	16	51.6%	5-10	12	38.7%
>30	5	16.1%	>10	-	-
Total	31	100%		31	100%

2) Identification of the Infecting Organism

* It was found that the most common infecting organism in the selected 31 patients was E.coli.

  Table [8] shows the different infecting organisms in the selected 31 patients with chronic bacterial prostatitis.

The Organism	No. of patients	Percentage of total
E. Coli	17	54.8%
Staph-pyogens	8	25.8%
Enterococci	1	3.2%
Staph + enterococci	1	3.2%
Pseudomonas pyocyeneous	4	12.9%
Total	31	100%

3) Determination of the pH of E.P.S

* The average pH of expressed prostatic secretions detected in 21 patients of the selected 31 patients was 7.5.

4) Culture and Sensitivity test for the E.P.S

* This was done for each case, where sensitivity to different types of antibiotics-including thiamphenicol has been detected.

5) Determination of Colony Count in E.P.S.

* Determination of colony count was available in 24 cases.
* Colony count in those 24 patients was above 100,000/cubic millimeter

X. Cystoscopic Examination

1. Introduction

* Difficult introduction was observed in 7/31 patients (22.5%) while easy introduction was noticed in the rest of patients.

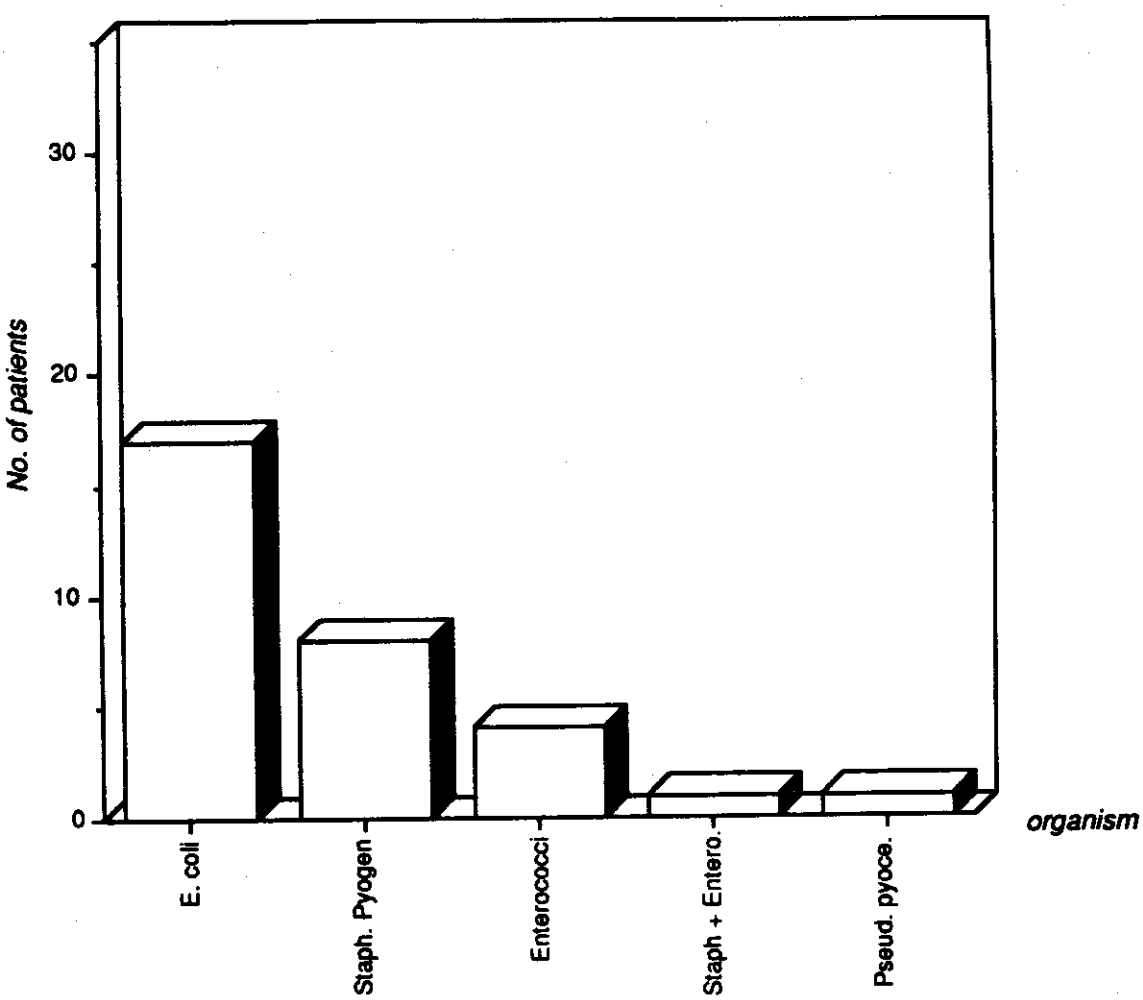

Fig. (12): Shows different infecting organisms in the selected 31 patients with chronic bacterial prostatitis.

* One of those 7 patients was diagnosed cystoscopically as bladder neck obstruction and this diagnosis was supplemented by urodynamic studies which revealed impairment of urinary flow rate.
* This patient underwent bladder neck incision later on with relief of all his symptoms post operatively.

2) Mucous Membrane

* There were 2 patients had bilharizial ulcers:
  - One of them had 2 superficial ulcers (one at the dome of the bladder and other in the anterior surface) in addition to small stone in the left ureteric orifice: the small stone was removed by cup biobsy forceps and the 2 superficial ulcers were cauterized.
  - The other one had chronic ulcer in the base of the bladder in addition to bilharzial polyp beneath the left ureteric orifice. This patient underwent-lateron-excision of the ulcer and bilharizial polyp.
  - Follow up of these 2 patients revealed improvement of all their symptoms.
  - Other bladder lesions are shown in table [9].

Table [9]: Shows different bladder lesions in the selected 31 patients where one patient may has more than one bladder lesion.

Bladder lesion	No. of patients	Percentage of total
- Hyperaemia	16	51.6%
- Sandypatches or Bilharzial tubercles	18	58%
- Trabeculations	6	19.3%
- Bilharzial ulcers	2	6.4%
- Stones	1	3.2%
- Diverticulum	1	3.2%

3) Ureteric Orifices

Ureteric orifices of the selected 31 patients were free except in 3 cases (9.6%) where small stone, bilharzial tubercle and bilharzial polyp were detected respectively in those 3 cases.

4) Bladder Neck

* Elevation of posterior lip of bladder neck was detected in 4/31 patients (12.9%).
* In only one of those 4 patients, the elevation of posterior lip was so sever that direct attention to bladder neck obstruction. Diagnosis of bladder neck obstruction was supplemented by associated trabeculations, presence of one diverticulum and urodynamic studies which revealed impairement of urinary flow rate.

5) Posterior Urethra

* Enlargement of prostatic lobes was identified in 22/31 patients (71%). Enlargement varies from mild to sever enlargement that may semulating senile enlarged prostate (Fig. 13).
* Mild to moderate prostatic congestion was observed in 17/31 patients (54.8%).
* Hypertrophied verumontanum was noticed in 7/31 patients (22.5%).

6) Anterior Urethra

- Anterior urethra was free in all cases.

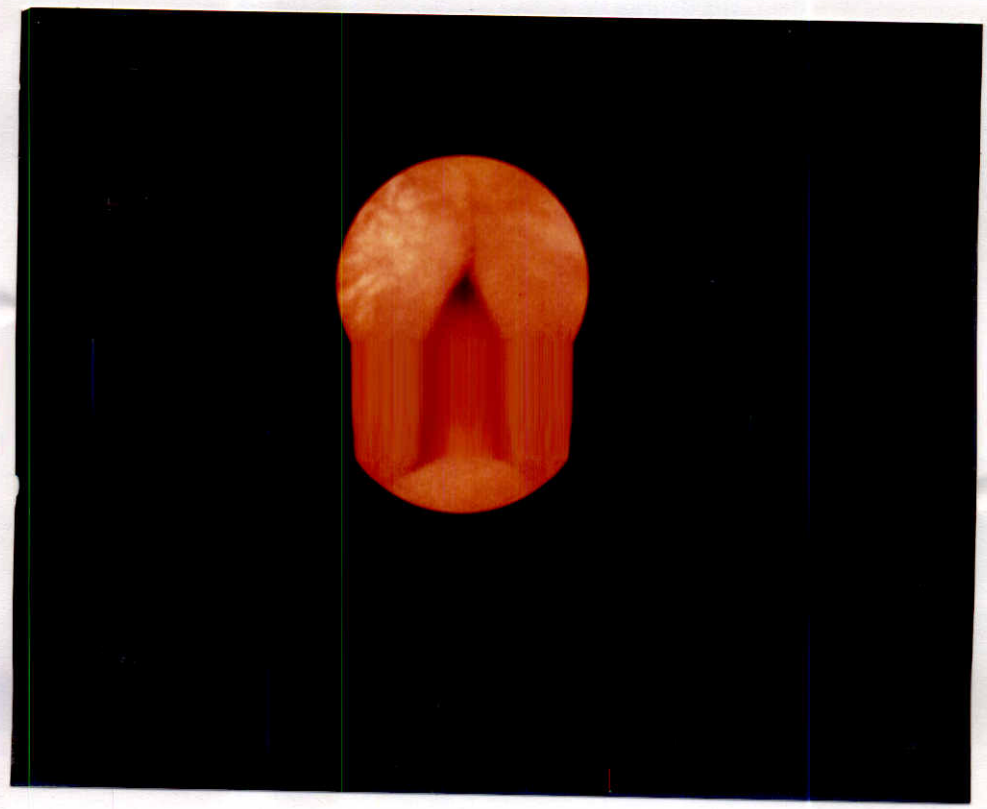

Fig. (13): Cystoscopic appearance of prostatic urethra in patient aged 32 years with chronic bacterial prostatitis showing hypertrophy of both prostatic lobes and verumontanum.

B) The Results After First and Second Injection Treatment

* Follow up the cases includes only 27 cases of the initially selected 31 patients with chronic bacterial porstatitis because the initial diagnosis of 4 patients was completely changed after cystoscopic examination as follows:
  - One patient was diagnosed and treated as bladder neck obstruction.
  - 2 patients were diagnosed and treated as bilharzial ulcer.
  - One patient was diagnosed and treated as radiolucent stone bladder.

* Therefore, follow up the cases in group I include 14 cases and in group II include 13 cases.
* Follow up the cases was at 2-3 weeks after injection and then every month for 3-4 months at least.
* Follow up including:

I. Subjective assessment: as regard improvement of symptoms.

II. Objective assessment including

1. Examination of urine (VB_1, VB_2, VB_3).
2. Examination of E.P.S.
   a) Pus cell count/H.P.F.
   b) PH of E.P.S.
   c) Culture and sensitivity
   d) Colony count/C. mm

* Of the injected 27 patients, only 11 cases (40.7%) required second injection as follow up of these cases did not indicate either subjective nor objective improvement after first injection.
* Those, 11 patients were 7 in group I and 4 in group II
* The interval between first and second injections was variable ranging from 2 to 5 months after first injection.
* Subjective and objective improvement of both groups I and II after first and second injection were recorded in the tables (10-24) (Vide infra).

I. Subjective improvement

* Improvement of one symptom after first injection did not necessitate its disappearance before second injection because it may temporarily disappear after first injection and reappear again after a variable period of time.

1) Burning micturation

Table [10]: Shows the number of patients suffering from burning micturation in each group before treatment and after first injection, number of relapse inpatients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts. Imp.. after 2nd inject.	percentage of Improv.
I	13	8	61.5%	5	1	4	66.6%
II	11	8	72.7%	3	1	3	75%

Thus overall, improvement after first injection was 67.1% and after second injection was 70.8%.

It was 64% in group I with percentage of failure 36% and 73.8% in group II with percentage of failure 26.2% .

2) Frequency

Table [11]: Shows the number of patients suffering from frequency in each group before treatment and after first injection, number of patients improved after first and second injection in each group, number of relapse in patients after first injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	7	3	42.8%	4	-	2	50%
II	5	3	60%	2	2	3	75%

Thus the overall improvement after first injection was 51.4% and after second injection was 62.5%.

It was 46.4% in group I with percentage of failure 53.6% and 67.5% in group II with percentage of failure 32.5%.

3) Difficulty of micturation

Table [12]: Shows the number of patients suffering from difficulty (to iniate, to maintain or to terminate) micturation in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection in each group and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	7	3	42.8%	4	-	3	75%
II	6	3	50%	3	-	3	100%

Thus, the overall improvement after first injection was 46.4% and, after second injection was 70.8%.

It was 58.9% in group I with percentage of failure 41.1% and 75% in group II with percentage of failure 25%

4) Abnormal Stream

Table [13]: Shows the number of patients suffering from abnormal stream (inturrpted, weak force or weak caliber of the stream) in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	6	4	66.6%	2	3	3	60%
II	4	3	75%	1	1	1	50%

Thus, the overall improvement after first injection was 70.8% and, after second injection was 55%.

It was 63.3% in group I with percentage of failure 36,7% and 62.5% in group II with percentage of failure 37.5%

5) Uretheral discharge

Table [14]: Shows the number of patients suffering from urethral discharge in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	2	1	50%	1	1	1	50%
II	4	3	75%	1	1	1	50%

Thus the overall improvement after first injection was 62.5% and, after second injection was 50%. It was 50% in group I with percentage of failure 50% and 62.5 in group II with percentage of failure 37.5%

6) Sexual Symptoms

Of the 19 married patients, 14 patients suffering from sexual troubles in the form of weak erection, premature ejaculation, post coital pain and haemospermia. One patient may has more than one sexual disorder.

I. Weak erection

Table [15]: Shows number of patients suffering from weak erection in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	3	2	66.6%	1	2	2	66.6%
II	2	1	50%	1	1	1	50%

Thus the overall improvement after first injection and after second injection was 58.3%. It was 66.6% in group I with percentage of failure 33.3% and 50% in group II with percentage of failure 50%.

II. Premature ejaculation

Table [16]: Shows number of patients suffering from premature ejaculation in each group before treatment and after first injetion, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	3	1	33.3%	2	-	1	50%
II	2	-	0%	2	-	2	100%

Thus, the overall improvement after first injection was 16.6% and, after second injection was 75%. It was 41.6% in group I with percentage of failure 58.4% and 50% in group II with percentage of failure 50%.

III Post Coital Pain

Table [17]: Shows number of patients suffering from post coital pain in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	2	1	50%	1	-	1	100%
II	2	2	100%	-	-	-	-

Thus, the overall improvement after first injection was 75% and, after second injection was 100%. It was 75% in group I with percentage of failure 25% and 100% in group II with no percentage of failure.

IV. Haemospermia

There was only one patient suffered from haemospermia which persist after first injection and he refused the second injection treatment and so percentage of failure was 100%.

7) Other Painful Symptoms

* Other painful symptoms include suprapubic pain, perineal heaviness, low back pain and groin pain.
* One patient may has more than one type of pain e.g. complaining of suprapubic pain in addition to perineal heaviness for example.

I. Suprapubic Pain

Table [18]: Shows number of patients suffering from suprapubic pain in each group before treatment and after first injection, number of relapse inpatients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	6	5	83.3%	1	3	4	100%
II	4	3	75%	1	2	2	66.6%

Thus, the overall improvement after first injection was 79.1% and, after second injection was 83.3%. It was 91.6% in group I with percentage of failure 8.4% and 70.8% in group II with percentage of failure 29.2%.

II. Perineal Heaviness

Table [19]: Shows number of patients suffering from perineal heaviness in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relapse in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	5	3	60%	2	1	3	100%
II	4	2	50%	2	-	2	100%

Thus, the overall improvement after first injection was 55% and, after second injection was 75%. It was 80% in group I with percentage of failure 20% and 75% in group II with percentage of failure 25%

III. Low Back pain

Table [20]: Shows number of patients suffering from low back pain, in each group before treatment and after first injection, number of relapse in patients after first injection, number of improved patients after first and second injection and percentage of improvement to the original suffers.

	After first injection			After second injection			
The group	No. of pts suffering before ttt	No. of pts Imp after 1st injection	Percentage of Improv.	No of pts suffering after 1st inject.	No. of relpase in pts. after 1st inject.	No. of pts Imp. after 2nd inject.	percentage of Improv.
I	2	1	50%	1	1	1	50%
II	3	2	66.6%	1	2	2	66.6%

Thus, the overall improvement after first injection was 58.3% and it is also 58.3% after second injection. It was 50% in group I with percentage of failure 50% and 66.6% in group II with percentage of failure 33.3%.

IV. Groin Pain

There were only 3 patients suffering from groin pain. Improvement was recorded in 2/3 patients {66.6%} with percentage of failure 33.3%.

It is noticed from the tables (18-20) that the painful symptoms were greatly improved whether after first or second injection.

* From the tables (10-20), the average improvement percentage of all symptoms for each group, after first and second injection could be detected as shown in table (21):

The group	Average improvement percentage after 1st injection	Average improvement percentage after 2nd injection
I	51.3%	69.8%
II	61.3%	73.3%

From the above table:

* Average improvement percentage after first injection in both groups = 56.3%.
* Average improvement percentage after second injection in both groups = 71.5%.
* Average improvement percentage in group I = 60.5% (After first and second injection).
* Average improvement percentage in group II = 67.3% (After first and second injection).

From the above we conclude the followings:

1. The better results were obtained in group II after second injection.
2. There was a significant increase in improvement of symptoms after second injection in both groups.
3. Improvement of symptoms in group II (which depend on the culture and senstivity) is better than that in group I (which depend on thiamphenicol).

** Complications of the New Technique*

1. Haematuria: was noticed in 15 cases of 38 injections (39.4%) [27 first injection + 11 second injection].
2. Haemospermia: was noticed in 6 cases of the 19 married injected cases(31.5%).
3. Acute retention of urine was noticed in only one patient of 38 injection (2.6%).

II. Objective Improvement

1. Pus cell count of expressed prostatic secretion

Table [22]: Shows pus cell count/H.P.F. in each group after First injection.

Group	0-10	percentage of total	10-20	percentage of total	>20	percentage of total
I	6	42.8%	8	57.1%	-	-
II	7	53.8%	3	23%	3	23%

Table [23]: Shows pus cell count/H.P.F. in each group after second injection.

Group	0-10	percentage of total	10-20	percentage of total	>20	percentage of total
I	4	57%	2	28.5%	1	14.2%
II	3	75%	1	33.3%	-	-

From the above tables (22-23), it is noticed that pus cell count/H.P.F. was significantly decreased after injection therapy in comparison to that before treatment where pus cell count/H.P.F. in 51.6% of patients was between 20-30 and and in 16.1% of patients was more than 30 pus cells before treatment. This indicate great improvement of pus cells in E.P.S. after injection treatment

It is noticed also that pus cell improvement after second injection was better than that it after first injection and it is better in group II than in group I.

2. PH of Expressed Prostatic Secretions

* Determination of pH of E.P.S. was available in 11 patients in each of group I and group II after first injection and it was available in 7 and 4 patients of group I and group II respectively after second injection.

  Table [24]: shows average pH of E.P.S. of each group after first and second injection.

Group	Average pH after first injection	Average pH after second injection
I	7.7	6.9
II	6.4	6.2

* From the above table, the average pH of E.P.S. after injection therapy was 6.8 (acidic) while it was 7.5 (Alkaline) before injection which indicates the effectiveness of injection in treatment of chronic bacterial prostatitis.

3. Colony Count of E.P.S.

Colony count of E.P.S. was less than 100,000/cmm. in 11/24 patients (58.3%) after first injection and 8/11 patients (72.7%) after second injection while it was over 100,000/cmm in all patients before treatment.

4. Bacterial Culture of Expressed Prostatic Secretions

Table [25]: Shows number and percentage of negative bacterial culture of expressed prostatic secretions of each group after first and second injection.

Group	After 1st injection			After 2nd injection		
	No. of patients	No. of -ve cult	%	No. of pahs	No. of -ve cult	%
I	14	7	50%	7	5	71.4%
II	13	7	61.5%	4	3	75%
The average percentage			55.7%			73%

* From the tables [10-25] the average improvement percentage after first and second injection could be detected as shown in table 26.

Table [26]: Shows number of improved patients in each group and average improvement percentage after first and second injection.

Group	After 1st injection			After 2nd injection		
	No. of patients	No. of Improved pts.	Percentage	No. of patients	No. of Imp. oved pts.	Percentage
I	14	7	50%	7	4	57%
II	13	7	61.5%	4	3	75%
The average improvement percentage			55.7%			66%

* The improvement percentage in group I = 53.5%
* The improvement percentage in group II = 68.2%

*** From the above we conclude the followings:**

1. The best result was obtained in group II after second injection.
2. The improvement of patients was significantly increased after second injection.
3. The improvement of patients in group II which was injected according to culture and senstivity is better than that in group I which was injected by thimaphenicol only.

*** The patient was considered improved if he fullfiled the following conditions:**

1. Negative bacterial culture of E.P.S.
2. Pus cell count in E.P.S. less than 10/H.P.F.
3. Colony count less than 100,000/cmm.
4. Improvement of symptoms.
5. Persistance of the above 4 conditions for at least 3 months after injection.

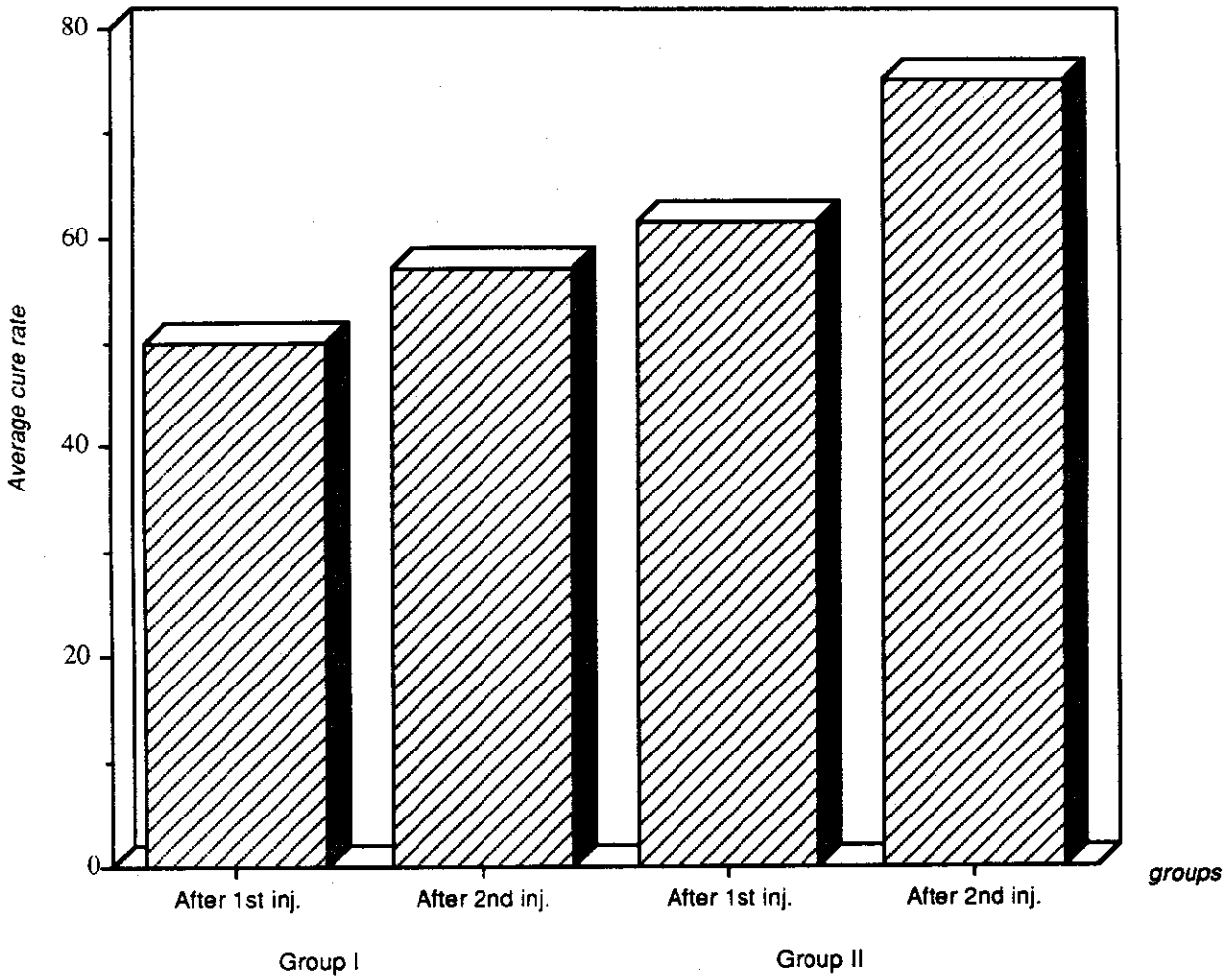

Fig. (14): * Average cure rate in both groups after first and second injection

- The 27 patients were classified, as regard improvement into good fair and poor according to the score which they have been recorded where the total score consists of improvement of 12 parameters including:
  1) Burning micturation.
  2) Difficulty of micturation.
  3) Frequency.
  4) Abnormal stream.
  5) Urethral discharge.
  6) Sexual problems.
  7) Other painful symptoms.
  8) Negative bacterial culture of E.P.S.
  9) Acidic pH of E.P.S.
  10) Colony count less than 100,000/cmm
  11) Pus cells less than 10/H.P.F. in E.P.S.
  12) Improvement of both subjective and objective symptoms for at least 3 months after injection

* The patients were considered good if they recorded a score more than 8/12 or more than 65% of the total score.
* The patients were considered fair if they recorded a score between 4-8/12 or 33.3-65% of the total score.
* The patients were considered poor if they recorded a score less than 4/12 or less than 33.3% of the total score.

- Number of good, fair and poor patients in each group after first and second injection were recorded in the following tables.

Table [27]: Shows number of good, fair and poor patients in group I after first injection.

Group I after 1st injection
(No. of patients = 14).

Patients	No. of patients	Percentage of total
Good	6	42.8%
Fair	5	35.7%
Poor	3	21.4%
Total	14	100%

Table [28]: Shows number of good, fair and poor patients in group II after first injection

Group II after first injection
(No. of patients = 13)

Patients	No. of patients	Percentage of total
Good	6	46.1%
Fair	4	30.7%
Poor	3	23%
Total	13	100%

Table [29]: Shows number of good, fair and poor patients in group I after second injection

Group I after second injection
(No. of patients = 7)

Patients	No. of patients	Percentage of total
Good	5	71.5%
Fair	2	28.5%
Poor	-	-
Total	7	100%

Table [29]: Shows number of good, fair and poor patients in group II after second injection

Group II after first injection
(No. of patients = 4)

Patients	No. of patients	Percentage of total
Good	3	75%
Fair	1	25%
Poor	-	-%
Total	4	100%

* From the above, it is observed that the highest percentage of good patients has been recorded in the culture and sensitivity group [group II] after second injection.

From tables [27-30], average number and percentage of good, fair and poor patients in both groups after injection therapy could be detected as shown in table [31].

Table [31]:

Group	After 1st injection		After 2nd injection	
	No. of pts.	Percentage of total	No. of pts.	Percentage of total
Good	12	44.4%	8	72.7%
Fair	9	33.3%	3	27.2%
Poor	6	22.2%	-	-
Total	27	100%	11	100%

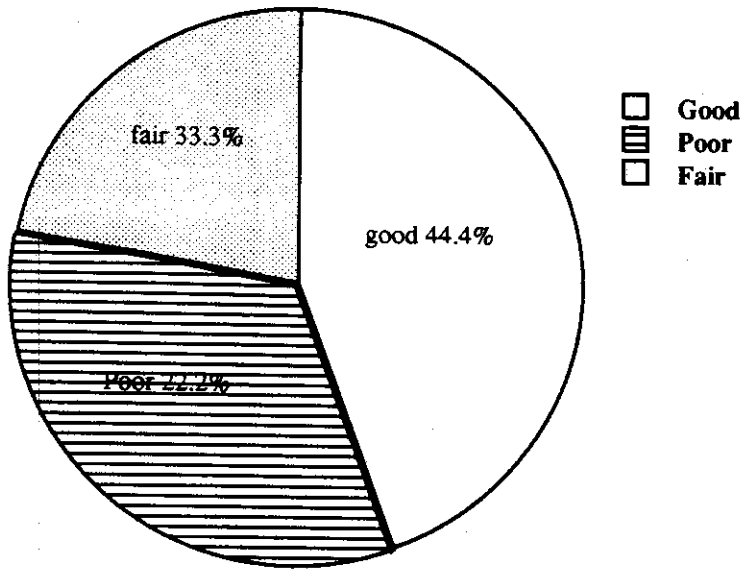

Fig. (15): * Average percentage of good, fair and poor patients in both groups after first injection.

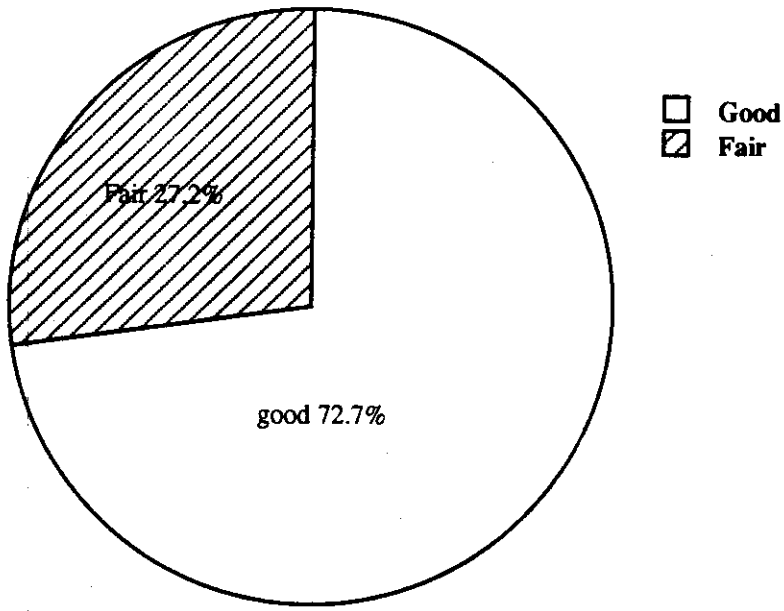

Fig. (16): * Average percentage of good, fair and poor patients in bothh groups after second injection