BROXYQUINOLINE AND BROBENZOXALDINE (ITP-VAGINAL TABLETS) IN THE TREATMENT OF LEUCORRHOEA

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Leucorrhoea is the commonest complaint of patients suffering from vaginitis. Although various micro-organisms infect the vagina, specific vaginitis is due to Trichomonas vaginalis, Monilia albicans and Haemophilus vaginalis. A variety of mixed pathogens are also recoverable on smear and culture viz. staphylococci, streptococci and E. Coli. For all such disorders usually an emperical treatment is given without proper investigations. This hit or miss treatment results in considerable wastage of time and money. It also affects the morale of the patient.

The present study was undertaken to investigate bacteriologically the causes of leucorrhoea and to observe the treatment with Broxyquinoline and Brobenzoxaldine (ITP vaginal tablet).

Each tablet of ITP consists of 416.66 mg. of Broxyquinoline and 83.33 mg. of Brobenzoxaldine. These compounds are dibromo derivatives of 8-hydroxyquinoline and 8-hydroxyquinaldine respectively.

Material and Methods

Hundred patients, some attending the out-patients and some admitted as in-patients in the Department of Obstetrics and Gynaecology, M. Y. Hospital, M. G. M. Medical College, Indore, were taken up for the present study. Out of these, seventy-five patients had leucorrhoea and twenty-five had no complaints.

A detailed history, general medical examination and routine laboratory investigations including blood, urine and stool examinations were done. Discharge from the posterior fornix was collected, smears were made and media inoculated for culture. Discharge was examined by hanging drop method to detect the presence of trichomonas vaginalis and E. coli.

Treatment with ITP-vaginal tablets was started from that very day. Treatment consisted in inserting one ITP-vaginal tablet as high as possible into the vagina in the morning and at bedtime for 10 days. Clinical examination, smears and culture were repeated between 5 days to 20 days after the insertion of last tablet. Those patients in whom smears and cultures were positive for pathogenic organisms after the first course of treatment, were asked to repeat the treatment and again smears and culture examinations were done.

Observation

Seventy-five patients with symptom of leucorrhoea were studied. The

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Received for publication on 2-1-1970.

additional symptoms like pruritus vulvae and burning during micturition were present in 9 and 13 patients respectively. Of the 25 asymptomatic women included in this study, 5 showed pathogenic organisms on smear and culture. The age group of the patients ranged from 15 to 58 years. The majority of patients being in the age group 25 to 34 years.

On clinical examination of the 75 patients with leucorrhoea, 16 showed evidence of trichomonal vaginitis, 41 of monilial vaginitis and 18 of nonspecific vaginitis. The latter included 8 cases of erosion cervix and 2 with chronic cervicitis.

All the 25 controlled cases, including 5 cases who showed pathogenic organisms had no clinical evidence of vaginitis.

On bacteriological investigation of 80 patients, 7 revealed trichomonas vaginalis, 40 monilia, 23 pyogenic organisms and in 10 no other organisms except the normal Doderlein bacilli were found. The latter finding was noted in the patients who had symptoms and clinical evidence of vaginitis, yet both smears and cultures were negative. Out of the 7 patients with trichomonal vaginitis only one case had pure infection while 6 had mixed infection, trichomonal and pyogenic. Out of 40 patients with monilial vaginitis, 25 patients had pure infection, while 15 had mixed infection, that is monilial and pyogenic infection. Twenty-three patients had streptococci, staphylococci and E. coli infection. The culture of the remaining 10 was found to be sterile for pathogenic organisms as shown in the first column of Table

The one patient with pure trichomonal infection did not report for examination. Out of the 25 patients with pure monilial infection, 13 were cured of their symptoms after first course of therapy, 3 after second course of therapy, 2 after third course of therapy. While 3 failed to report after first course of therapy and 4 after second course of therapy. Out of the 23 patients with pure pyogenic infection, 4 were cured after first course of therapy. While 8 failed to report after the first course of therapy, and 11 after the second course of therapy.

Out of the 6 patients with mixed trichomonal and pyogenic infection, 1 was cured after first course of therapy, 1 after second course of therapy, 1 after third course of therapy. One failed to report after first course of therapy, 1 after second course of therapy and 1 after third course of therapy. Out of the 15 patients with mixed monilial and pyogenic infection, 5 were cured after first course of therapy, 1 after second course of therapy and 1 after third course of therapy, while 2 failed to report after first course of therapy and 4 after second course of therapy.

Out of the 10 patients with sterile culture for pathogenic organisms, 5 were relieved of their symptoms after first course of therapy and 2 continued to have symptoms but showed no pathogenic organisms on repeated cultures, while 3 failed to report after first course of therapy.

The one patient with pure trichomonal infection did not report for further culture. Out of the 25 patients with pure monilial infection, 22 reported for the second time, 13 showed sterile culture and 9 still showed monilial infection. Out of the 9 patients with monilial infection

TABLE I

No. of each group	After 1st course		After 2nd course			After 3rd course			Remarks
	Reported	Cured	No.	Reported	Cured	No.	Reported	Cured	
I—Pure :									
Trichomonal 1	Nil	—	—	—	—	—	—	—	1 failed to report
Monilial 25	22	13	9	5	2	2	2	2	3 failed to report after first course, 4 after second course.
Pyogenic 23	15	4	11	—	—	—	—	—	8 failed to report after first course and 11 after second course.
II—Mixed :									
Trichomonal & Pyogenic 6	5	1	4	3	1	2	1	1	1 failed to report after first course, 1 failed to report after second course and 1 after third course.
Monilial and Hyogenic 15	13	5	8	4	1	3	3	3	2 failed to report after first course and 4 after second course.
III—Symptomatic treatment of 10 patients with normal flora.	7	5	—	—	—	—	—	—	3 failed to report after first course. 2 Contd. to have symp. but showed no pathogenic organism on repeated culture.

only 5 came for follow-up for the third time. Out of these 5 patients, 3 showed sterile culture and 2 showed monilia, which were sterile for monilial infection on the fourth follow-up.

Out of 23 patients with pure pyogenic infection, 15 reported for the second time, 4 showed sterile culture and 11 showed pyogenic organisms. Out of these 11 patients none of them came for a third follow-up.

Out of the 6 patients with mixed trichomonal and pyogenic infection, 5 reported for the second time, 1 showed sterile culture and 4 showed trichomonal infection. Out of these 4, 3 came for the third follow-up, 1 showed sterile culture, while 2 showed trichomonal infection. Out of these 2 patients only 1 came for the fourth follow-up and the culture was found sterile for trichomonas vaginalis.

Out of the 15 patients with mixed monilial and pyogenic infection, 13 who reported for the second time, 5 showed a sterile culture and 8 monilial infection. Out of these 8 patients only 4 came for the third follow-up, 1 showed sterile culture and 3 showed monilial infection. On the fourth follow-up all the 3 were sterile for monilial infection as shown in Table II.

Comment

The incidence of trichomonal, monilial and pyogenic infection was 8.75 per cent, 50 per cent and 28.75 per cent respectively, in the present series.

It is claimed that the ingredients of ITP vaginal tablets disintegrate and spread evenly over the mucosal rugae. The carrier helps the ingredients to reach the tiniest of area, establish an immediate intimate contact with the pathogens and destroy them. ITP-vaginal tablets contain lactose and sucrose, which are fermented by the bacteria and fungi, with resulting acidity in the vagina. In this way, ITP-vaginal tablet helps to restore the normal pH of the vagina and facilitate proliferation of the normal vaginal bacterial flora.

Krishna Menon and Mary Willmott (1962) studied 225 cases and found trichomonas vaginalis in 100. Menon quoted a cure rate with metronidazole (Flagyl) as 56.3 per cent after 3 months. Naval Kishore (1965) reported a cure rate 90 per cent in initial stages and 75.8 per cent 3 months after cessation of the treatment with Flagyl. Teton *et al* (1963) reported a cure rate 62 per cent with Flagyl.

Out of 7 patients with trichomonal vaginitis, 5 (83.33 per cent) came for follow-up and 60 per cent of the patients were cured.

Hasseltine *et al* (1942) found monilia in 12 out of the 18 pregnant women who had vaginal irritation. Pregnancy is well known as one of the natural conditions which predisposes to mycotic vulvo-vaginitis, the incidence being 2-5 times greater in pregnant than in non-pregnant women. In the present study monilia was found in 29 pregnant and 6 non-pregnant women in the symptomatic group.

Out of the 40 patients with monilial vaginitis, 35 came for follow-up, 22 patients (88 per cent) with pure infection and 13 (86.77 per cent) with mixed infection. Cure rate was 81.8

TABLE II

Findings on smears and culture

Initial positive or pathogen		2nd after 1st course of therapy		3rd after IInd course of therapy		4th after IIIrd course of therapy	
		Reported	Findings	Reported	Findings	Reported	Findings
Pure :							
Trichomonal	1			—	—	—	—
Monilial	25	22	13 Neg. for Monilia 9 Pos. for Monilia.	5	3 Neg. for Monilia 2 Pos. for Monilia.	2	2 Neg. for Monilia
Pyogenic	23	15	4 Neg. for Pyogens 11 Pos. for Pyogens.	—	—	—	—
Mixed :							
Trichomonal	6	5	1 Neg. for Tricho. 4 Pos. for Tricho.	3	1 Neg. for Tricho. 2 Pos. for Tricho.	1	1 Neg. for Tricho.
Monilial & Pyogenic	15	13	5 Neg. for Monilia 8 Pos. for Monilia.	4	1 Neg. for Monilia 3 Pos. for Monilia	3	3 Neg. for Monilia
10 Pathogen Negative with c/o leucorrhoea.	Nil	7 All culture neg. for pathogens but 2 persisted with symptoms.					

per cent and 69.23 per cent respectively. The results were poor with mixed infection. The over all incidence of cure was 77.14 per cent.

Out of the 23 patients with pyogenic infection only 15 (65.2 per cent) came for follow-up and 4 (26.67 per cent) patients were cured of their symptoms.

Out of the 10 patients with normal vaginal flora only 7 (70 per cent) came for follow up, and 5 (71.4 per cent) were relieved of their symptoms.

The cure rates thus obtained were almost identical with the reported ones with other drugs.

During present study we did not find any side effects of this drug.

Conclusions

Eighty cases of specific and non-specific vaginal infection were studied with topical use of ITP-vaginal tablets.

Majority of the cases were in age group 25-34 years and leucorrhoea was the main presenting symptom.

Treatment was given in two or three courses if patient did not respond to first and second course of therapy.

As regard trichomonal and monilial vaginitis cure rate was 60 per cent and 77.4 per cent respectively. In monilial vaginitis results were better in pure infection as compared with mixed infection, 81.8 per cent with pure infection and 69.23 per cent with mixed infection.

Result in non-specific vaginitis was 26.67 per cent.

In 7 patients with normal vaginal flora who had leucorrhoea, 71.4 per cent were relieved of their symptoms.

During present study we did not find any side effects of this drug.

Acknowledgement

We are grateful to Sandoz (India) Ltd. for supplying the tablets for clinical trial. We are thankful to Dr. J. N. Monga, Professor and Head of the Department of Pathology, M. G. M. Medical College, Indore, for bacteriological help. We thank Dr. P. N. Pathak, Superintendent, M. Y. Hospital, for permission to use the case material.

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