

Control of Concomitant Vaginal Moniliasis During Metronidazole Therapy for *Trichomonas Vaginalis**

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IN the experience of many clinicians, the use of metronidazole for treatment of vaginal trichomoniasis leads to a further problem in therapeutic management, namely, control of vaginal moniliasis that develops in some patients during the course of metronidazole therapy. Prevention of these fungal infections is preferable to treating them after they develop. Accordingly, it was decided to investigate a method of concurrent adjunctive therapy that shows promise of reducing the incidence of these monilial infections.

An alkaline douche preparation, Stom Aseptine,† seems ideally suited as adjunctive therapy for this purpose. Both its efficacy in preventing fungal infections during metronidazole therapy and its effectiveness as a routine cleansing douche have been evaluated in this study.

MATERIALS AND METHODS

Two hundred twenty-nine private patients were used in this study, the majority being of middle class socio-economic status. Pre-treatment examination included blood counts, determination of the pH of the vaginal secretion, urinalysis, wet saline smear for candida and trichomonas using a suitable medium,‡¹ and Papanicolaou smears.

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† Stom Aseptine Douche Powder, Harcliffe Laboratories, Inc., Brooklyn, New York.

‡ Nickerson's Medium, The Ortho Pharmaceutical Corporation, Raritan, New Jersey.

Patients were divided into two groups. Group I consisted of 100 patients with trichomoniasis and these were further divided into two sub-groups, A and B.

Group I-A consisted of 50 patients with trichomoniasis who were treated with metronidazole (250 mg. orally t.i.d., for 10 days) with Stom Aseptine used as a douche before retiring and upon arising.

Group I-B was the control group, consisting of the other 50 patients with trichomoniasis who were treated with metronidazole alone (250 mg. orally, t.i.d., for 10 days) without douching.

In both these groups culture studies were done for trichomonads and fungi before and after treatment and pre- and post-treatment records were kept as to pruritus and other pelvic discomfort, dysuria, frequency of urination, color of discharge, and presence or absence of offensive odor.

Group II consisted of 129 patients who were instructed to use Stom Aseptine as a routine vaginal douche. In 50 post-partum patients (following normal vaginal delivery) douching was started three weeks after delivery, and in 79 post-operative patients douching was started two weeks after surgery. Surgery included: Caesarean section 11, myomectomy 8, hysterectomy 15, salpingectomy 5, tubal ligation 5, dilatation and curettage 35 (10 for diagnosis and 25 following incomplete abortion). All patients in Group II used the

Group	Number of patients	Anti-trichomonal therapy	Adjunctive therapy	Number of patients developing moniliasis	Percentage incidence of moniliasis
I-A	50	Metronidazole 250 mg. orally t.i.d. for 10 days	Stom Aseptine douche before retiring and upon arising	2	4%
I-B	50	Metronidazole 250 mg. orally t.i.d. for 10 days	None	8	16%

Stom Aseptine douche once daily for two weeks and were followed up for two menstrual cycles.

RESULTS

The following tabulation shows the occurrence of monilial infections in *Groups I-A and I-B* at the end of the 10-day treatment period with metronidazole. It was found that Stom Aseptine douching achieved a 75 per cent reduction in the incidence of moniliasis during treatment of trichomonal vaginitis with metronidazole. Moniliasis developed in only two of the 50 patients using Stom Aseptine as adjunctive therapy—an incidence of 4 per cent. In the control group of 50 patients who did not use Stom Aseptine douching, the incidence of moniliasis was four times as great.

Results in *Group II* showed specific advantages of Stom Aseptine as a routine cleansing douche for postpartum and postoperative patients. Offensive odors were greatly decreased and itching, burning, and stinging were completely relieved in 24 to 48 hours. Vaginal and cervical debris was removed except in the areas of cuff infection or granulation tissue, and even these regions were found to be notably cleaner.

Of special interest is the fact that no alteration occurred in the Papanicolaou smear except in a few patients in whom it improved to a more favorable classification.

DISCUSSION

Even though traditionally, the acid douche has been used in treating vaginitis, the alkaline douche has been increasingly advocated in recent years.

In a study comparing mucolytic activity of alkaline and acid solutions, Fischer² rejected vinegar as an effective cleansing or therapeutic douche. Both he and Glynn³ found a tendency of acid douches to coagulate or precipitate glycoproteins in vaginal mucus as evidenced by the "ropey" discharge in the douche. In contrast, the alkaline douche provides mucolytic action enhanced by a low surface tension and is accordingly a superior cleansing douche. Furthermore, instead of exacerbation of perineal itching, stinging, and burning, as experienced by many patients after an acid douche, alkaline douching relieves these symptoms promptly, is more soothing, and results in a cleaner feeling by the patient.⁴

Since neither acid or alkaline douching has more than a transitory effect on vaginal flora^{2,3} or pH,⁵

the principal advantage clearly lies with the mucolytic and cleaning superiority of the alkaline douche. By carrying away mucus and proteinaceous debris, the alkaline douche permits more direct action by specific therapeutic agents on the pathogenic organisms.

The actual incidence of moniliasis (16 per cent) encountered in our control series (*Group I-B* where the Stom Aseptine douche was not used) is somewhat lower than that found by others. Following the report by Moffett and McGill⁶ that vaginal moniliasis may be encouraged during use of metronidazole, Beveridge⁷ reported its incidence as 23 per cent. Other studies have shown that approximately 20 per cent of women treated with Metronidazole are subsequently found to have monilia.

The reasons for these monilial infections are not clear, but two possibilities are suggested. Does a trichomonal infection tend to inhibit monilial growth, with fungi proliferating later when therapy has eliminated the trichomonads? Or does metronidazole, by some unknown mechanism, support or favor the growth of monilia? Further study is indicated to resolve these questions.

SUMMARY AND CONCLUSIONS

One hundred patients with vaginal trichomoniasis were treated with oral metronidazole to eliminate the trichomonal infection. Fifty of these used concurrent adjunctive therapy in the form of twice daily alkaline douches with Stom Aseptine. The other fifty used no adjunctive douching.

Moniliasis during metronidazole therapy developed only one-fourth as frequently in the group using the Stom Aseptine douche as in the control group—4 per cent in contrast to 16 per cent.

Another 129 patients used the Stom Aseptine alkaline douche routinely once daily for cleansing purposes in the postpartum or postoperative period. Prompt relief from perineal itching and burning was observed as well as cleaner and healthier appearance of the vaginal mucosa and cervix.

The following conclusions are supported by the findings of this investigation.

1. During oral metronidazole therapy of trichomoniasis, douching with Stom Aseptine achieves a 75 per cent reduction in the incidence of vaginal moniliasis.

(Concluded on page 475)

when it sponsored the first "Fight for Freedom Dinner" for the N.A.A.C.P. He founded and has served as chairman of the Public Affairs Committee of the Detroit Medical Society which has concerned itself with political support for liberal candidates for office and especially the promotion of Negro citizens for posts on the City Council and the bench.

Dr. Swan is a life member of the N.A.A.C.P. and a member of the Board of Directors of its Detroit branch. He was chairman of the membership campaign in 1963 which netted the largest number of members this or any other branch in the history of the organization ever recruited. He was also chairman of the 1965 "Fight for Freedom Dinner" which raised the maximum gross funds obtained from \$67,000 to \$113,000 in one year. Dr. Swan has served three terms as president of the Howard University Alumni Association of Detroit and is a member of its executive committee. He has served the Detroit Board of Education as a member of the planning committee for the new Eastern High School and as a member of study committees to examine conditions at

three Detroit High Schools. He was appointed by Governor John Swainson and reappointed by Governor George Romney to membership on the Detroit and Vicinity Planning Commission.

Dr. Swan was awarded the N.A.A.C.P. plaque for "Outstanding Service" in 1963 and 1965. In 1964 he received the "Alumnus of the Year Award" from the local Howard Alumni Association and in 1965 the Detroit Medical Society gave him its "Citizen of the Year" award, the first time the citation was given to a physician. In 1962 he received a citation from the Phi Beta Sigma Fraternity for "Exemplary Service to the Community." He is a member of this fraternity and has served three terms as its local president and is a member of its executive committee. Dr. Swan is the organizer and president of "Medical Affiliates," a new group including members of all the healing professions to work for political and community betterment.

Dr. Swan is a member of the Grace Episcopal Church and is a Mason and a Shriner. He is married and has two daughters, one son and one grandson.

(Mosee and Barber, from page 463)

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(Clark and George, from page 465)

2. For routine daily vaginal douching following delivery or pelvic surgery, Stom Aseptine provides highly effective antipruritic, soothing, deodorizing, mucolytic, and cleansing actions.

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