

INCIDENCE OF TRICHOMONAS VAGINALIS VAGINITIS DURING PREGNANCY AND ITS TREATMENT WITH S. V. C.

by

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Trichomonas vaginalis vaginitis forms a comparatively minor but important problem of obstetrician's practice and much work has been done on the subject during past few years. Many authors (Ian Donald 1952, Shah S. R. 1958, Plent. et al. 1956) report highest incidence during child-bearing period when ovarian activity is at its prime and vagina with respect to pH and squamous epithelium is more resistant to infection in general than at any other time. Pregnancy may render patient more liable to infection or activate the infection which may be already existing. Clinically, trials with antibiotics and other drugs have been reported in literature (Donald 1952, Shah 1958, Greenblatt and Barfield 1951, Shaw et al. 1952, Lang et al. 1953, Gaiduer and Dokes 1956, Brentand and Moricard 1952). Many of these drugs and almost all the antibiotics tried were effective but considerable incidence of recurrence has been reported and permanent cure was not possible.

We have here reported incidence of *trichomonas vaginalis* vaginitis during pregnancy in 252 cases and

treatment with S.V.C. in proven cases.

Material and Method

The patients were pregnant women who attended the antenatal clinic of N. Wadia Maternity Hospital, Bombay 12.

As we wished to study the incidence of *trichomonas* infection during pregnancy as such, patients were taken at random without considering whether they were symptomatic or not. The selected patients were specifically asked for the following complaints:

(i) Leucorrhoea—its degree and smell. (ii) Pruritus. (iii) Burning micturition. (iv) Erythema and swelling of vulva. (v) Ulceration of skin.

A speculum examination was then carried out to examine the vagina and cervix and to collect the discharge with a sterile applicator; discharge was taken from the region of the fornices and smear for Gram's staining was made. Discharge collected with the speculum was suspended in saline for wet preparation, which was examined under microscope for *trichomonas vaginalis*, associated monilial infection and bac-

TABLE 1

No. of cases examined.	Cases + ve for trichomonas	Cases — ve for trichomonas	Incidence.
252	60	192	23.8 %

TABLE 2

Total No. of +ve cases.	Symptomatic	Asymptomatic
60 (100 %)	43 (71 %)	17 (29 %)

terial contamination. Smear with Gram's staining was examined to note general bacterial flora.

Out of 43 symptomatic and 16 asymptomatic cases 17 and 6 cases were respectively associated with monilial infection.

Symptomatology

TABLE III

Symptoms	No. of cases
Leucorrhoea	47
Pruritus	26
Erythema	5
Ulceration	1
Burning micturition	17

Discussion

Incidence of trichomonas vaginalis in pregnant and non-pregnant women is reported by several workers.

is lower than that reported by Feo (1953) in negro pregnant women. Comparatively higher incidence might be due to the fact that majority of our patients belonged to low income group where hygienic conditions are poor and body resistance lowered due to malnutrition.

Incidence and Parity. Higher incidence was noted in multipara than in primipara (Shah 1958, Donald 1952). Out of 60 positive cases, 15 were primiparae and 45 multiparae, thus giving the ratio of 1: 3.

Incidence of Trimester. In literature (Feo 1953) highest incidence has been reported in last trimester of pregnancy. In our study, incidence in second and third trimester was the same (27 cases each) while that in

Name of workers	Year	No. of cases studied		Incidence in pregnant women	Incidence in non-pregnant women
		Pregnant	Non-pregnant		
Shah	1958	50	350	8%	27%
Plenty et al	1956	214	818	20%	31.6%
Davis & Grand	1952	—	538	—	3.72%
Feo	1953	500 (negro) 200 (whites)	—	43.6% 16.5%	—
Hypes & Ladewig	1953	—	1000	—	19%
Bedoya et al	1956	—	1594	—	20%
M. K. K. Menon	1959	102	100	18%	17%
Present study	1961	256	—	23.8%	—

Some authors report higher incidence during pregnancy while others report higher incidence during non-pregnant state. But all the authors agree that incidence of trichomonas vaginalis is highest during child-bearing period, i.e. between 20-40 years of age. Incidence in our cases

first trimester was 5 cases only. We think that this may be partly due to the fact that the patients usually do not come for consultation to the hospital during the first trimester of pregnancy.

Associated Organisms. Feo (1953) observed that trichomonas vaginalis

survived in presence of Doederlein bacilli. In our case trichomonas vaginalis was associated with Doederlein bacilli in 28 cases and with candida in 23 cases. pH of the discharge in which trichomonas were found, was between 4 and 6.

Symptomatology. Leucorrhoea was the commonest of complaints in patients with trichomonas vaginitis and out of 60 positive cases 47 complained of mild to severe leucorrhoea. Discharge varied from scanty thin white to profuse, thick, yellowish white, frothy and foul smelling. Thick curdy or mucoid discharge was noted in some of the cases. Another common complaint was itching and burning micturition. Erythema and ulceration, however, were present in very few of the cases.

Associated Pathology. On examination, in nearly half of the cases vagina was red and inflamed, associated with red and inflamed cervix. In cases where severe itching was complained of external genitals showed marks of scratching.

Treatment. We treated the patients with S.V.C. (acetarsol vaginal compound) an arsenical preparation. Use of arsenic in the treatment of trichomonas vaginalis vaginitis was described as early as 1933 by Gellhorn and highly recommended by Miezes (1957). No toxic effects were reported and discharge was reduced after second or third treatment.

Though S.V.C. is not as effective as antibiotics, it is cheap and comparatively effective, and even where therapy fails, symptomatic relief is obtained.

As most of our patients came from the lower income group, they could also afford S.V.C. for their treatment.

Patients were instructed to insert one tablet of S.V.C. every morning and evening for 15 days, and to report for follow-up after 4-7 days of completion of therapy. They were also instructed that during the course of treatment they should (i) wear washed underlinen and change it daily, (ii) abstain from sexual intercourse, and (iii) abstain from douching.

All the examined patients were asked to report after 2 days and were treated, if found infected. Out of 60 positive cases, only 46 turned up for their treatment. They were given S.V.C. tablets and were asked to report after 15 days. Out of 46 patients thus treated, 15 turned up for their second speculum examination and follow-up. The rest might not have come due to symptomatic relief obtained by the treatment.

Thus, out of 15 patients treated, 11 were negative for trichomonas vaginalis after one course of treatment and 2 after 2 courses. In one case trichomonas infection was lessened after 2 courses but not completely eradicated. One case did not turn up

TABLE 4

No. of cases treated with S.V.C.	Wet preparation -ve for trichomonas after 1st course	Wet preparation -ve for trichomonas after 2nd course	Wet preparation +ve for trichomonas after 2 courses	Patients who did not turn up after 2 courses	Cure rate
15 (100%)	11 (73.3%)	2 (13.3%)	1 (6.6%)	1 (6.6%)	93%

for follow-up after two courses. Cure rate was 93%. Our cure rate of 93% is comparable with that of 58% to 98% reported in literature with antibiotics and drugs such as Nystatin (Shah 1958), Aureomycin (Greenblatt and Barfield 1951), Vagisol (Shaw et al 1952), Terramycin (Lang et al 1953, Kistner and Duncan 1954), Tritheon (Gardner and Duker 1956), Estrogen (Brentand and Moricard 1950), etc.

Out of 15 cases treated there was complete symptomatic relief in 6 cases, while 6 had slight relief and 3 had no relief at all. Out of 9 cases who had slight or no symptomatic relief, 6 cases were also positive for moniliasis, and the symptoms might be due to associated monilial infection.

Toxicity and Recurrence. We did not notice any toxic effect following the treatment with S.V.C. High incidence of recurrence is always noted in cases of trichomonas infection. We could not follow up the patient for a sufficiently long period and so could not note the rate of recurrence after treatment with S.V.C. Slight or no response and recurrence might be explained by the facts that (i) parasites might be harboured in Skene's or Bartholin's gland or in lower urinary tract, and (ii) male partners might be responsible for reinfection.

Summary

(1) 252 pregnant women were examined at the antenatal clinic of N. Wadia Maternity Hospital, Bombay, for incidence of trichomonas vaginalis vaginitis and 60 were positive giving incidence of 23.8%.

(2) Out of 60 positive cases, 46 turned up for treatment and were

treated with S.V.C. two tablets daily by vaginal route for 15 days.

(3) Out of 46 cases treated, 15 turned up for second speculum examination. 11 were negative for trichomonas. Out of 4 positive cases, 2 were negative after second course of treatment, 1 had slight improvement and 1 did not turn up for examination. Cure rate with S.V.C. was thus 93%. This is comparable with cure rate with other drugs and antibiotics.

Acknowledgments

We are thankful to Dr. K. M. Masani, M.D. (Lond.), F.R.C.S. (Eng.), F.I.C.S., Hon. P.M.O., for the permission given to us to carry out the investigations. We are also thankful to Resident Medical and Nursing Staff of N. Wadia Maternity Hospital for their help during the investigation. Thanks are also due to, Messrs. May & Baker for liberal supplies of S.V.C. tablets.

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