

MANAGEMENT OF VULVOVAGINAL CANDIDIASIS

AMEET S. DAFTARY • MURARI S. NANAVATI

SUMMARY

Vaginal discharges were collected from 100 pregnant and 100 nonpregnant women complaining of leucorrhoea to determine the prevalence of candidal vulvovaginitis. It was found to be 46% during pregnancy and 18% in nonpregnant women. The discharge was submitted to laboratory analysis comprising of Pap smear, Hanging drop examination, KOH treated smear and culture on Sabouraud's medium. Their relative efficacy in detecting candidal infection was 28%, 6%, 75%, and 100% respectively.

All pregnant patients were treated with local Clotrimazole vaginal pessaries (candid) at bed-time for 6 nights, and Clotrimazole (candid) cream externally applied twice daily for 6 days.

All non-pregnant patients were treated with Fluconazole 150mg tablet orally in a single dose. The results of the study have been discussed.

MATERIALS AND METHODS

One hundred pregnant women and a hundred nonpregnant women were enlisted in the study. After recording the history, a speculum examination was performed, a pap smear obtained from high lateral fornix, and the discharge collected in saline, this was examined in the laboratory for-

1) Hanging drop examination

2) KOH smear and

3) Discharge cultured on Sabouraud's agar slant and results recorded after 72 hours incubation.

Bimanual examination and abdominal examinations were completed after obtaining the vaginal discharge for laboratory evaluation.

All candida positive patients who were pregnant were advised to use Clotrimazole vaginal pessaries at bed-time together with Clotrimazole cream to be locally applied

Dept. of Obst. & Gyn. Nowrosjee Wadia Hospital, Bombay.

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twice daily for 6 days.

All non-pregnant patients were advised one single oral tablet of Fluconazole 150 mgm at bed time.

All patients included in the study were followed up after 1 week and 1 month respectively, and advised to abstain from sexual intercourse for a week, and use a condom thereafter until the study period was completed.

RESULTS

Incidence

The incidence of vulvovaginal candidiasis was higher during pregnancy as compared to the non-pregnant state. This is in agreement with observations of other authors as shown in Table-I.

CLINICAL OBSERVATIONS AND DISCUSSION

The symptomatology of the affected patients, and the presence of pre-disposing factors and associated lesions observed in the study is shown below:

A) Symptomatology

The above analysis reveals that pruritus vulvae is the cardinal symptom in women suffering from candidiasis. Only 10 out of the total 64 women suffering from vulvovaginal candidiasis were asymptomatic (excepting Leucorrhoea).

B) Predisposing factors

Analysis of possible predisposing factors revealed the following.

C) Associated factors

A scrutiny of possible other factors contributing to the occurrence of leucorrhoea revealed the following.

The above table shows that erosion is a commonly associated lesion, and that concurrent trichomoniasis was seen in 26% of pregnant and 33.3% of nonpregnant women suffering from candida infection.

MYCOLOGICAL ANALYSIS

In the 64 patients who revealed vaginal discharge positive for candidiasis, a detailed comparison of the laboratory tests

Table - I

Incidence of vulvovaginal candidiasis

Author	% Incidence of candidiasis	
	Pregnancy % incidence	Nonpregnant % incidence
1. Amonkar (1959).	—	8.8%
2. Daftary et al (1960)	48%	36%
3. Das and Sen (1967)	35%	26%
4. Mhatre et al (1977)	38%	23%
5. Present Authors	46%	18%

Table II
Symptomatology

Symptom	Analysis of symptoms			
	Pregnant N=46		Non-pregnant N=18	
	Number	Percentage	Number	Percentage
Leucorrhoea	46	100%	18	100.0%
Pruritus vulvae	42	91.3%	12	66.6%
Dysuria	32	69.5%	8	44.4%
Dyspareunia	—	—	6	33.3%
Vulval erythema	13	28.2%	6	33.3%

Table III
Predisposing Factors

Predisposing Factors	Pregnant patients N=46		Non-pregnant patients N=18	
	Number	Percentage	Number	Percentage
	1. Antibiotic therapy	6	13.04%	2
2. Steroid therapy	-	-	1	5.6%
3. Vaginal contraceptive	-	-	3	16.7%
4. Obesity	12	26.08%	5	27.8%
5. Strong family history of Diabetes	3	6.52	3	16.7%

Table IV
Associated pathology

Associated	Pregnant women N=46		Non-pregnant women N=18	
	Number	Percentage	Number	Percentage
	1. Cervical erosion	32	69.5%	8
2. Trichomoniasis	12	26.08%	6	33.3%
3. Nonspecific vaginitis	10	21.7%	3	16.6%
4. Genital Prolapse	-	-	3	16.6%
5. Anaemia (Hb < 8.05)	4	8.6%	2	11.1%

Table V
Comparative Efficacy of Laboratory Tests

Test	No. of cases	% Efficacy
1. Hanging Drop	4/64	6.2%
2. KOH smear	48/64	75.0%
3. Pap smear	18/64	28.1%
4. Sabouraud's culture	64/64	100.0%

Table VI
Symptomatology before and after treatment of vulvovaginal candidiasis

Symptoms	Pregnant patients N=46		Non-pregnant patients N=18	
	Before	After	Before	After
1. Leucorrhoea	46 100%	28 60.8%	18 100%	5 27.7%
2. Pruritus	42 91.3%	6 13.04%	12 66.6%	2 11.1%
3. Dysuria	32 69.5%	4 8.6%	8 44.4%	2 11.1%
4. Erythema	13 28.2%	2 4.3%	6 33.3%	-
5. Dypareunia			6 33.3%	1 5.6%

utilized for their efficacy in detecting candidiasis is shown in Table-V

The above table reveals that the smear made from KOH treated discharge, is quite efficacious in detecting candidiasis and is recommended as an office test for screening patients for presence of candidal disease.

TREATMENT

The efficacy of Clotrimazole (candid) in pregnant subjects and Fluconazole

(Syscon 150) in nonpregnant subjects was evaluated on the basis of persisting symptomatology and mycological evaluation.

The Results were as follows:

The above table shows marked relief of symptoms in both the groups.

MYCOLOGICAL CURE

This was assessed on the basis of repeat

Table VII

Mycological evaluation before and after treatment

Mycological	Pregnant women N=46		Non-pregnant women N=18	
	Before	After	Before	After
1. KOH Smear	38/46 82.6%	4/46 8.6%	10/18 55.5%	2/18 11.1%
2. Sabouraud's culture	46/46 100%	16/46 34.7%	18/18 100%	3/18 16.6%

vaginal examination of vaginal discharges at the end of one month respectively.

The above table reveals that the symptomatic cure rate exceeds the mycological cure rate.

SUMMARY AND CONCLUSIONS

1. A study of 200 cases complaining of leucorrhoea were analysed for incidence of vulvovaginal candidiasis. It revealed the incidence of 46% during pregnancy and 18% in nonpregnant women.
2. Pruritus vulvae was the cardinal symptom suggestive of candidal disease.
3. Pregnancy, obesity, previous drug therapy with antibiotics, steroids and oral contraceptive pills predispose to its occurrence.
4. Trichomoniasis and cervical erosion are common associated lesions observed.

5. A KOH smear provides a satisfactory screening test for candidiasis, however, mycological culture on Sabouraud's medium is the final test for establishing the diagnosis.

6. Clotrimazole and Fluconazole are effective therapeutic tools in the treatment of this condition.

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