

# A CLINICAL STUDY ON THE EFFICACY OF HOMOEOPATHIC POTENTISED MEDICINES IN VAGINAL CANDIDA COLONISATION IN WOMEN WITH TYPE II DIABETES MELLITUS.

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## ABSTRACT

### BACKGROUND:

*One of the difficulties diabetic women face is recurrent yeast infection of the vulva and vagina. The substantial increase in the incidence of vulvovaginal candidiasis especially in diabetic women demands prompt treatment that would restore the normal vaginal flora and also keep the blood sugar levels in check. Homoeopathy, a safe alternative method, based on the idea of individualization uses a holistic approach towards these cases. Being a safe and cost-friendly intervention, it not only relieves the complaints of the individuals but also help them boost up their self-esteem. This study aims at exploring the effectiveness of Homoeopathic medicines in vulvovaginal candidiasis in women with type II Diabetes mellitus. In this study, 15 women with Candidiasis and type II Diabetes mellitus selected from SKHMCH OPD and IPD and rural centers, were prescribed with the homoeopathic similimum after thorough case taking and analyzing the investigation reports. Follow ups were taken every month for three months and the improvement of the cases were assessed based on the signs, symptoms and investigation reports. After the administration of the Homoeopathic similimum, notable improvement was elicited in the signs and symptoms and also the lab reports. Mercurius solubilis was noted to be the most effectively used medicine and 200 th potency was noticed as the most frequently used potency.*

### OBJECTIVES:

*To study the efficacy of homoeopathic medicines in vaginal candidiasis in women with type II diabetes mellitus, to observe the correlation between the regression of vaginal candidiasis and diabetes, to observe the effect of change in pH in the regression and proliferation of vaginal species of Candida, to observe the variations in signs and symptoms among patients before and after treatment with homoeopathic medicines, to observe the most commonly indicated*

*medicines, to observe the effectiveness of various potencies, to observe the incidence of vaginal candidiasis in various age groups.*

**METHOD:**

*15 cases of vaginal candidiasis with type II diabetes mellitus were identified from the OPD's, IPD's of Sarada Krishna Homoeopathic Medical College and Hospital and also from rural health centers. A detailed history was taken according to the standardized case record format with particular reference to the name, age, and address, OPD no., presence of predisposing factors, onset and duration of complaints, treatment taken. All the patients were asked about their symptoms (vaginal discharge, vulvovaginal itching, vulvovaginal burning sensation, dysuria and dyspareunia). The amount, color, character and smell of vaginal discharge were noted. Blood sugar analysis was done to determine the blood sugar level, vaginal pH was noted and wet smear of the vaginal discharge was done for candidiasis. Prescription was made based on homoeopathic principles. Follow up, Blood sugar analysis and Wet smear was repeated and vaginal pH was noted for consecutive three months. Pre and post study were analyzed with proper statistical techniques.*

**RESULTS:**

*On evaluating the 15 cases pre and post treatment, the following conclusions were made:*

*Homoeopathy can be effectively used in the treatment of Vulvovaginal candidiasis in women with type II Diabetes mellitus. The affection was seen predominantly in middle aged females between the age of 36 to 45 years. Vulvovaginal candidiasis regressed at an early rate when compared to Diabetes mellitus. Mercurius solubilis has played an effective role in the treatment of Vulvovaginal candidiasis in women with type II Diabetes mellitus. The most commonly indicated potency was found out to be the 200 th potency. 3 months after the administration of medicine, all 15 cases had a normal vaginal pH ranging from 4 to 5. In this study, 73% of the population regained normal vaginal flora and 20% of the population showed marked depletion in the number of colonies. There was also significant reduction in the blood sugar levels in all 15 cases (100%). There was significant reduction in all the signs and symptoms before and after treatment with Homoeopathic medications. CONCLUSION:*

*In this study, 15 diabetic women with vulvovaginal candidiasis were identified and prescribed with a proper similimum. On analyzing the case before and after treatment, an appreciable improvement was noted in the signs and symptoms as well as the lab investigation reports. The similar symptoms between Candidiasis, Diabetes mellitus and Mercurius solubilis showed an evidence that the Homoeopathic drug Mercurius solubilis has an efficacious part in the treatment of Candidiasis in women with type II diabetes mellitus. Therefore, after complete analysis of all the results obtained pre and post treatment, it is evident that Homoeopathy is indeed an effective choice of treatment in cases of Candidiasis in*

*women with type II Diabetes mellitus thereby helping the individuals perform their daily activities without any hinderance and subsequently improve their quality of living.*

**KEY WORDS:**

*Vulvovaginal candidiasis, Type II Diabetes Mellitus.*

## INTRODUCTION

Vulvovaginal candidiasis is a distressing infection found in women especially of the reproductive age group. VVC shows its prevalence in about 75% of women of reproductive age once in their life, and about 9% of women experience the same but more frequently more than three episodes per year, which is known as recurrent vulvovaginal candidiasis (RVVC) <sup>[1]</sup>. This is specific in case of type II diabetes mellitus mainly due to the fact that yeast thrives in an environment rich in sugar.

Although vaginal candidiasis is not life threatening, it may bring about quite a lot of discomfort and inconvenience. This topic still remains undiscussed amongst many women owing to the taboo nature of the subject. This often ends in lack of timely intervention and prompt treatment without which complications may arise. The symptoms occurring as a result of the infection, thwart the daily activities of the women and subsequently brings down her morale <sup>[2]</sup>. The modern method of treatment handles vulvovaginal candidiasis with antifungal drugs either in the form of oral agents or vaginal agents. However, these drugs have their own drawbacks. While, in Homoeopathy, the similimum, when prescribed after individualizing the patient, not only helps in inhibiting the growth of the yeast but also improves the body's vitality to fight against infections thereby reducing the risk of further infections.

Type II Diabetes mellitus is a heterogenous metabolic disorder where the blood glucose level is affected which in turn impairs the energy producing capacity of the body cells. Diabetes mellitus which was first thought through as the 'Rich man's disease' now has no such limits. For the past 20 years, diabetic patients have exponentially doubled worldwide <sup>[3]</sup>. 415 million adults between the age of 20-79 have been said to have Diabetes mellitus in 2015, according to the International Diabetes Federation, which can even grow to 642 million in 2040 with pervasiveness rising from 8.8 to 10.4% <sup>[4]</sup>. The biggest concern is the booming of Type II Diabetes in children, adolescents, and young adults <sup>[3]</sup>. Apart from all the health concerns it causes, it also seems to have a vital influence on the socio-economic status of the society.

Other than genetics, environmental factors also account for the global rise of diabetes in recent decades. This can be tackled to some extent by adopting a healthier lifestyle indulging in a healthy diabetic diet and more physical activity. In addition to all the healthy measures taken, diabetes may also demand medications. Amidst all the other systems of medicine, Homoeopathy provides a holistic approach towards diabetic patients. Homeopathy seeks to understand the patient as a whole. This is

known as Individualization and is obtained by thorough case taking. A constitutional remedy is then selected based on the 'Law of Similia'. Another approach to the disease is by the use of Organ remedies which acts effectively by keeping the level of the blood sugar in check <sup>[5]</sup>.

The risk of infections is extra when it comes to diabetic patients especially in those with type II diabetes. Elevated levels of glucose favor the growth of several organisms and high sugars impairs the body's ability to fight against these infections <sup>[6]</sup>. There are various studies owing to the fact that every woman experience lower genital tract infections at least once in their lifetime but the same is more intense in women with type II diabetes mellitus when compared to women without the disease. Diabetes mellitus increases not only the prevalence of vulvovaginal infection but also increases the risk of complications. Prompt treatment may help the women come back to her healthy state of mind and well-being.

#### **MATERIALS AND METHODS:**

##### **STUDY SETTING:**

This clinical research took place in Sarada Krishna Homoeopathic Medical College and Hospital located in Kulasekharam, Kanyakumari district, Tamil Nadu.

##### **SELECTION OF SAMPLE:**

- Sample size- 15
- Selection technique- Purposive Sampling

##### **TYPE OF STUDY:**

Quasi experimental study - purposive sampling, pre and post study without a control group.

##### **SOURCE OF DATA:**

15 Diabetic patients with vaginal candidiasis were identified from various units of Sarada Krishna Homoeopathic Medical College & Hospital OPD's, IPD's and rural health centers through enrolment process.

##### **SELECTION OF TOOL:**

The cases were taken as per the standardized case record format of SKHMC hospital. **RESEARCH PARTICIPANTS:**

Rural and urban population seeking treatment from Sarada Krishna Homoeopathic Medical College and Hospital were the research participants.

##### **INCLUSION CRITERIA:**

- Women with Type II Diabetes, between the age group of 25-60 years.
- Diabetic patients with genital discomfort.
- Patients purely on homoeopathic medication.

##### **EXCLUSION CRITERIA**

- Pregnant and puerperal women.

- Patients undergoing other medications.
- Hormonal pill users.
- Known HIV patients.

#### BRIEF OF PROCEDURE:

15 cases of vaginal candidiasis with type II diabetes mellitus were identified from the OPD's, IPD's of Sarada Krishna Homoeopathic Medical College and Hospital and also from rural health centers. A detailed history was taken according to the standardized case record format with particular reference to the name, age, and address, OPD no., presence of predisposing factors, onset and duration of complaints, treatment taken. All the patients were asked about their symptoms (vaginal discharge, vulvovaginal itching, vulvovaginal burning sensation, dysuria and dyspareunia). The amount, color, character and smell of vaginal discharge were noted. Blood sugar analysis was done to determine the blood sugar level, vaginal pH was noted and wet smear of the vaginal discharge was done for candidiasis. Prescription was made based on homoeopathic principles. Follow up, Blood sugar analysis and Wet smear was repeated and vaginal pH was noted for consecutive three months. Pre and post study were analyzed with proper statistical techniques.

#### FBS ANALYSIS:

1.5ml of blood sample was collected from the patients after 7-8 hours of fasting using a single use 3ml syringe of Dispovan. The sample was stored in a labelled Safe lab clot accelerated test tube. It was then centrifuged and then analysis was done by GOP PAP method with collected serum. It was incubated for 10 minutes under 37°C. Value of fasting blood glucose level was determined with the semi auto analyzer (INNO LAB 200).

#### WET SMEAR TEST:

To a drop of suspension of the vaginal discharge in saline on a slide, a drop of 10% KOH solution was added. After mixing the two, a cover slip was placed on top it. KOH dissolves all the cellular debris which made Candida hyphae and buds stand out in prominence.

#### VAGINAL pH:

Vaginal pH was noted using standard pH strips. After taking proper sanitary measures, the pH swab was taken out by its handle making sure that it did not come in contact with anything. The swab was held between the thumb and the forefinger so that the test strip was facing the thumb. The labia were spread using the hands and the swab was inserted into the lateral wall of the vagina. It was held in the same way for about 5 seconds and then the swab was removed without touching the paper.

#### OBSERVATION AND RESULTS

#### GRAPHICAL REPRESENTATION

#### DISTRIBUTION OF CASES ACCORDING TO AGE:

SL.NO	AGE GROUPS	NO. OF CASES	PERCENTAGE
1	25-35	5	33.3%
2	36-45	6	40%
3	46-55	3	20%
4	56-60	1	6.6%

## OBSERVATION BASED ON CLINICAL FEATURES:

## PRURITIS TABLE:

SL.NO	INTENSITY	PRE-TEST	%PRE-TEST	POST-TEST	%POST-TEST
1	Nil	0	0	13	86.6%
2	+	4	26.6%	2	13.3%
3	++	4	26.6%	0	0
4	+++	7	46.6%	0	0
5	++++	0	0	0	0

## OFFENSIVENESS OF THE VAGINAL DISCHARGE:

INTENSITY	PRE-TEST	% PRE-TEST	POST-TEST	% POST TEST
Nil	12	80%	14	93.3%
+	3	20%	1	6.6%
++	0	0	0	0

+++	0	0	0	0
++++	0	0	0	0

## ACRIDITY OF THE DISCHARGE:

INTENSITY	PRE-TEST	% PRE-TEST	POST-TEST	% POST TEST
Nil	8	53.3%	13	86.6%
+	4	26.6%	2	13.3%
++	3	20%	0	0
+++	0	0	0	0
++++	0	0	0	0

## DIABETIC SYMPTOMS:

S.NO	SYMPTOMS	Follow Up 1	Follow Up 2	Follow Up 3
1	Ulcer	No Change	Better but Persists	Better but Persists
2	Ulcer	No Change	Better but Persists	Better but Persists
3	Blurred Vision	No Change	No Change	Better but Persists
4	Fatigue	Better but Persists	Better but Persists	Nil
5	Fatigue	Better but Persists	Nil	Nil

6	Polyuria	Better but persists	Better but Persists	Better but Persists
7	Polyuria	Better but persists	Better but Persists	Better but Persists
8	Blurred Vision	No Change	No Change	No Change
9	Burning in Soles	No Change	Better but Persists	Better but Persists
10	Polyuria	No Change	Better but Persists	Better but Persists
11	Fatigue	Better but persists	Nil	Nil

12	Itching of Skin	No Change	Better but Persists	Better but Persists
13	Ulcer	No Change	Better but Persists	Better but Persists
14	Polyphagia	No Change	Better but Persists	Better but Persists
15	Fatigue	Better but Persists	Nil	Nil

## OTHER ASSOCIATED SYMPTOMS:

INITIAL	FOLLOW UP 1	FOLLOW UP 2	FOLLOW UP 3
Back pain	Persist	Better but persist	Better



Knee joint pain	Persist	Better but persist	Better
Knee joint pain, breathing difficulty	Persist	Better but persist	Better
Breathing difficulty	Persist	Better	Nil
UTI	Better	Nil	Nil
Breathing difficulty, back pain	Better but persist	Better but persist	Better
Burning pain in vagina	Better but persist	Nil	Nil
cough	Better	Nil	Nil
R/A of cold	R/A of cold	O/A of cold	O/A of cold
Breathing difficulty, knee joint pain	Knee joint pain persist	Better	Better
Shoulder joint pain	Shoulder joint pain persist	Better	Better
Lower abdominal pain	Better but persist	Better	Nil
Lower abdominal pain	Better	Nil	Nil
Lower abdominal pain	Better but persist	Nil	Nil
Fever, breathing difficulty	Better	Nil	Nil

## PER-VAGINAL EXAMINATION:

EXAMINATION	PRE TEST	% PRE TEST	POST TEST	% POST TEST
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Inflamed cervix and vagina	7	46.6%	0	0
Normal cervix and vagina	8	53.3%	15	100%

OBSERVATIONS BASED ON LAB INVESTIGATIONS:  
CULTURE STUDIES:

SL.NO	INITIAL CULTURE	I FOLLOW UP	II FOLLOW UP	III FOLLOW UP
1	72,000	10,000	250	0
2	3,00,000	40,000	650	170
3	80,000	5800	100	0
4	1,10,000	25,000	420	0
5	75,000	3200	410	0
6	95,000	2800	270	186
7	68,000	3700	330	0
8	70,000	6400	500	0
9	80,000	2700	660	0
10	1,00,000	34,000	370	0
11	60,000	7300	340	0
12	62,000	5700	290	0
13	72,000	4800	420	0
14	3,10,000	91,000	990	278
15	82,000	5500	360	0

## VAGINAL pH:

pH	INITIAL VISIT	I FOLLOW UP	II FOLLOW UP	III FOLLOW UP
4	1	1	1	1
4.5	6	6	6	6
5	1	3	6	6
5.5	5	5	2	2
6	2	0	0	0

## BLOOD SUGAR LEVEL (mg/dl):

SL.NO	INITIAL VISIT	I FOLLOW UP	II FOLLOW UP	III FOLLOW UP
1	148	142	139	132
2	152	147	143	140
3	145	141	136	132
4	149	142	136	133
5	137	134	132	130
6	143	142	141	143
7	152	150	147	145
8	150	146	143	141
9	145	143	143	145
10	147	144	141	139

11	149	145	141	137
12	140	136	136	135
13	156	154	150	149
14	139	138	135	134
15	128	128	127	126

## OBSERVATIONS BASED ON THE MEDICINES ADMINISTERED:

SL.NO	MEDICINE ADMINISTERED	NO. OF CASES	PERCENTAGE
1	Mercuriussolubilis	5	33.3%
2	Kreosotum	4	26.6%
3	Calcarea carbonica	3	20%
4	Sulphur	2	13.3%
5	Sepia officinalis	1	6.6%

## OBSERVATIONS BASED ON THE POTENCY ADMINISTERED:

SL.NO	POTENCY	NO. OF CASES	PERCENTAGE
1	200	7	46.6%
2	30	5	33.3%
3	1M	3	20%

**CONCLUSION:**

On evaluating the 15 cases pre and post treatment, the following conclusions were made:

- Homoeopathy can be effectively used in the treatment of Vulvovaginal candidiasis in women with type II Diabetes mellitus.
- The affection was seen predominantly in middle aged females between the age of 36 to 45 years.
- Vulvovaginal candidiasis regressed at an early rate when compared to Diabetes mellitus.
- Mercuriussolubilis has played an effective role in the treatment of Vulvovaginal candidiasis in women with type II Diabetes mellitus. • The most commonly indicated potency was found out to be the 200<sup>th</sup> potency. • 3 months after the administration of medicine, all 15 cases had a normal vaginal pH ranging from 4 to 5
- In this study, 73% of the population regained normal vaginal flora and 20% of the population showed marked depletion in the number of colonies • There was also significant reduction in the blood sugar levels in all 15 cases (100%)
- There was significant reduction in all the signs and symptoms before and after treatment with Homoeopathic medications.

#### **SUMMARY:**

In this study, 15 diabetic women with vulvovaginal candidiasis were identified and prescribed with a proper similimum. On analyzing the case before and after treatment, an appreciable improvement was noted in the signs and symptoms as well as the lab investigation reports. The similar symptoms between Candidiasis, Diabetes mellitus and Mercuriussolubilis showed an evidence that the Homoeopathic drug Mercuriussolubilis has an efficacious part in the treatment of Candidiasis in women with type II diabetes mellitus. Therefore, after complete analysis of all the results obtained pre and post treatment, it is evident that Homoeopathy is indeed an effective choice of treatment in cases of Candidiasis in women with type II Diabetes mellitus thereby helping the individuals perform their daily activities without any hinderance and subsequently improve their quality of living.

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