ORAL VERSUS VAGINAL METRONIDAZOLE IN THE TREATMENT OF SYMPTOMATIZING BACTERIAL VAGINOSIS IN WOMEN DURING CHILD BEARING PERIOD

Thesis
Submitted for Partial Fulfillment of Master Degree in Obstetrics & Gynecology

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Marwa Hassan Loutfy

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List of Abbreviations

A. vaginae	*Atopobium vaginae*
AIDS	Acquired Immune Deficiency Syndrome
b.	Bacteroid
BV	Bacterial Vaginosis
C. albicans	*Candida albicans*
CDC	Center of disease control
CIN	Cervical intraepithelial neoplasia
E. coli	*Escherichia coli*
FAO	Food and Agriculture Organization of the United Nations
FDA	Foodand Drug Administration
G. vaginalis	*Gardnerella vaginalis*
GIT	Gastrointestinal Tract
H_2O_2	Hydrogen peroxide
HDL	High Density Lipoproteins
HIV	Human Immune Deficiency Virus
HPF	High power field
IUD	Intra Uterine Device
KOH	Potassium hydroxide
L.	*Lactobacillus*
M. curtisii	*Mobiluncus curtisii*
M. hominis	*Mycoplasma hominis*
M. Mulieri	*Mobiluncus Mulieri*
mRNA	Messenger Ribonucleic acid
P. bivia	*Prevotella bivia*
PAP	Proline amino peptidase

List of Abbreviations(Cont.)

Pap smear	Papanicolaou smear
PCR	Polymerase chain reaction
PID	Pelvic inflammatory disease
PROM	Premature rupture of the membranes
rDNA	Ribosomal Deoxyribonucleic acid
RVVC	Recurrent vulvovaginal candidiasis
spp.	Species
STD	Sexually transmitted disease
STI	Sexually transmitted infection
T. vaginalis	*Trichomonas vaginalis*
U. urealyticum	*Ureaplasma urealyticum*
US	United States
UTI	Urinary tract infection
VVC	Vulvo-vaginal candidiasis
WHO	World Health Organization
yrs.	Years

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Introduction

Bacterial vaginosis is considered the most common cause of vaginal infections in women of reproductive age world wide. The defining characteristic of bacterial vaginosis is the replacement of normal vaginal lactobacillus bacterial flora with facultative anaerobes (gardnerella vaginalis and mycoplasma hominis) and/or anaerobes (prevotella, peptostreptococcus, eubacterium, and mobiluncus) with an increase in vaginal PH from less than 4.5 to as high as 7.0. In such condition the concentrations of bacteria increase from 100-fold to 1000-fold ***(French et al., 1997)***.

At least 50% of women with bacterial vaginosis are completely asymptomatic.

The current standard for clinical diagnosis of vaginal infections requires the presence of 3 of 4 Amsel's criteria.

1- Thin, white, homogeneous discharge.

2- Clue cells on microscopy of wet mount.

3- PH of vaginal fluid >4.5.

4- Release of a fishy odour on adding alkali (10% KOH)

(ACOG Practice, 2006)

It is more common in black race, smoking, routine vaginal douching, recent use of broad spectrum antibiotic and in those with IUDs ***(Workowski et al., 2006)***.

While bacterial vaginosis is not regarded a sexually transmitted diseases, the prevalence is generally higher among sexually active than sexually non active women ***(Yens et al., 2006)***. It is high among women with pelvic inflammatory disease (PID) more or less being predictive of subsequent PID associated with gonorrhoea or Chlamydia, it has been associated with an increase incidence of vaginal cuff cellulitis and abscess formation following trans-vaginal hysterectomy ***(Ness et al., 2005)***.

But, in pregnancy bacterial vaginosis is associated with late miscarriage, preterm birth, preterm premature rupture of membranes, and postpartum endometritis ***(Hauth Jc et al, 2000).***

The goal of bacterial vaginosis treatment is to promote a predominance of lactobacilli in women's vaginal flora and to decrease anaerobic and other bacteria ***(Nyirjesy, 2006)***. Bacterial vaginosis can be treated with antibiotics such as metronidazole and clindamycin. However, there is a considerable rate of recurrence ***(Bradshaw et al., 2006)***.

Oral or vaginal metronidazole for 7 days is the first-choice medication for treating bacterial vaginosis ***(Kou Mans et al., 2002)***.

Although oral therapy is less messy and inexpensive than vaginal therapy, can be taken any where, and has no local side effects. It has a metallic taste and some G.I.T. troubles (nausea, vomiting and diarrhea), that may affect patient compliance rendering course complete of treatment is in doubt which may result in recurrence. On the other hand, vaginal routes are less likely than the oral forms to cause systemic side effects mainly G.I.T. troubles which are one of the causes for patient non compliance. There are many researches that compare oral versus vaginal therapy with metronidazole. The choice of the route of metronidazole administration depends mainly on many factors such as efficacy, cost, convenience, compliance and patient preference ***(Nyirjesy et al., 2006)***.

Aim of the Work

To compare oral versus vaginal metronidazole in the treatment of symptomatizing bacterial vaginosis among women in child bearing period.

Patients and Methods

This is an interventional study that will be carried out at Ain Shams University Maternity Hospital in out-patient gynecological clinic. The study will include (50) females in child bearing period with bacterial vaginosis as diagnosed by Amsel's criteria.

An explanation of the study will be informed to the participants and an informed consent will be taken from them.

A detailed medical history of all patients will be recorded. Complete general and vaginal examination will be performed.

Exclusion Criteria:

1- Pregnant females.
2- Postmenopausal females.
3- Females with another vaginal infections.

The patients will be subdivided into tow groups:

-**The first group** will receive oral metronidazole, 500mg twice daily for 7 days.

-**While the second group** will receive intravaginal metronidazole gel o.75% or vaginal suppositories 5gm once daily for 5 days.