



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>

INTERNATIONAL JOURNAL
OF ADVANCED RESEARCH

RESEARCH ARTICLE

Evaluation of candidial vaginitis treatment using different regiment of fluconazole

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Manuscript Info

Manuscript History:

Received: 11 December 2013

Final Accepted: 25 December 2013

Published Online: January 2014

Key words:

Candidial Vaginitis, Fluconazole, Treatment regimen.

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Abstract

For any physician involved in the health care of women, the treatment of vaginitis remains a challenge. Vaginitis accounts for more than an estimated 10 million physician office visits annually, and it remains the most common reason for patient visits to obstetrician-gynecologists. Treatment of vaginitis has been undertaken and new approaches to the problem have been investigated.

The purpose of this study was evaluation of different treatment protocol of fluconazole in women having candidial vaginitis.

Evaluation and comparison of candidial vaginitis treatment with 150 mg single dose of Fluconazole versus 50 mg for 10 days of fluconazole in women in age of 15 to 45 year carried out in Boo- Ali Hospital.

Current interventional experimental survey has performed as randomized clinical among patients attending to Boo-Ali Hospital during November 2011 to July of 2012. Patients received either 150 mg single dose of fluconazole or 50 mg for 10 days. Mean age of 125 women in this study was 33.4 ± 7.9 year and 96.8% were married. 65 patients (52%) received single dose and 60 patients (48%) received 10 days regimen of fluconazole. 50% in single dose group and 67.7% in 10 days group had complete cure; but no statistically significant difference observed among two groups. In follow up of the next month, 10% of patients in the 10 days group and 25% in the single dose group had recurrence.

It can be concludes that 10 days regimen has better therapeutic efficacy with lower recurrence rate compare to single dose of fluconazole.

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Introduction

The composition of vaginal flora changes with age, stress, hormonal influence, general health status, and sexual activity (Kent, 1991). Vaginitis is a diagnosis based on the presence of symptoms of abnormal discharge, vulvovaginal discomfort, or both. Discharge flows from the vagina daily as the body's way of maintaining a healthy environment. Normal discharge is usually clear or milky with no malodor. A change in the amount, color, or smell; or itching or burning could be due to an imbalance of healthy bacteria in the vagina, leading to vaginitis. Treating the vaginitis may lead to a better and healthy life from personal, sexual and many other aspects. Candida Albicans as a common cause of vaginitis among women of reproductive ages may lead to a malodor and cheese-like secretions and results in a lot of complaints among affected females and their partners (Foxman, 2013). Therefore, an optimal treatment may have many somatic and functional benefits for couples. Fluconazole as a drug of choice for candidial vaginigitis may be used for these patients either as a single dose regimen or a complete ten days course (Center for

disease control and prevention, 2006). Current study aimed to evaluate the efficacy of each regimen and also compare with each other.

Pathophysiology: Aerobic and anaerobic bacteria can be cultured from the vagina of prepubertal girls, pubertal adolescents, and adult women (McClelland, 2009). The overgrowth of normally present bacteria, infecting bacteria, or viruses can cause symptoms of vaginitis. Atrophic vaginitis is associated with hypoestrogenism, and symptoms include dyspareunia, dryness, pruritus, and abnormal bleeding.

Frequency: In the United State vaginitis is common in adult women and uncommon in prepubertal girls. Vaginitis is one of the most common reasons for gynecologic consultation consisting of approximately 10 million (from non-parametric) were the performed tests and 0.05 was considered as significance level.

Materials and Methods

Design and Settings: This study was an interventional experimental survey to quantify and comparing the therapeutic efficacy of two regimens for candidial vaginitis in women of 15-45 years old, attending Boo-Ali Hospital. Sample population included 125 women. Patients were treated with a single dose regimen of 150 mg or a ten day regimen of 50 mg per day of fluconazole (Fig.1).

1. Patients Selection:

Patients randomly selected by means of a Table of random numbers generator. Thereafter, they were randomly assigned to receive single dose (150 mg) or ten days (50 mg per days) regimen of fluconazole.

2. Inclusion Criteria:

Females aged 15 to 45 years (reproductive ages) and with candidial vaginitis, were included in sample population.

3. Exclusion Criteria:

Patients who were receiving any other treatment for candidial vaginitis along with intervention, and also those patients who were unable to return for follow up were excluded. Other exclusion criteria included pregnancy and breast-feeding, severe drug-induced adverse effects, and drug hypersensitivity.

4. Ethical Issues:

The medical ethics committee of Azad University of Medical Sciences approved the clinical trial program and all of the patients were voluntarily incorporated in this survey and filled an informed consent. The Helsinki and Nuremberg statements are respected all over the survey.

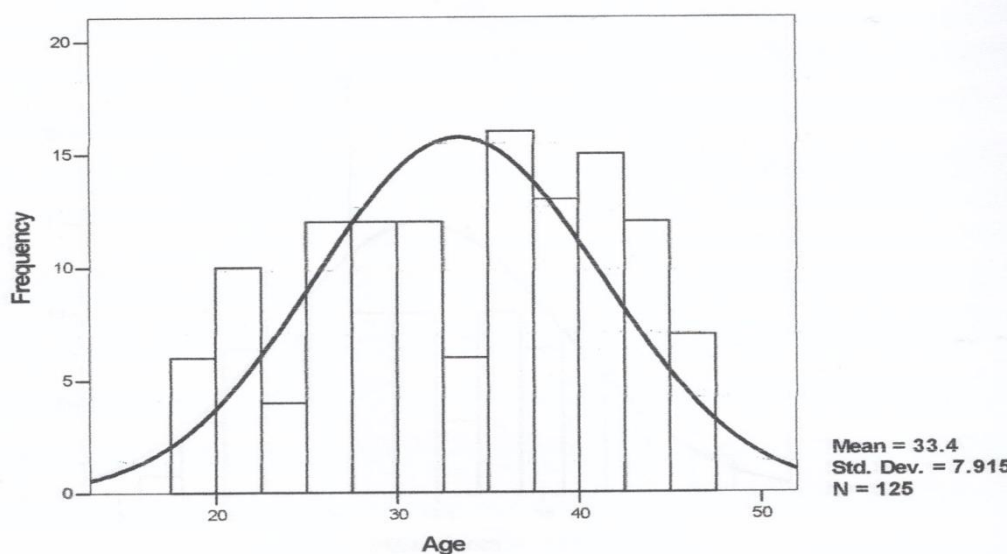


Fig 1: Distribution of age of sample population

Outcome measurements:

All patients were followed-up for one month after initial visit. The important indexes included a self-designed scoring system developed by five major symptoms' cheese-like secretions, erythema of labia and vulva, itching, burn-sensation, and dyspareunia. This scoring system consisted of 1-20 points and patients with a significant decrease in after treatment points, considered as successful therapeutic cases.

Statistical Analysis:

Data from 125 patients were analyzed using SPSS (version 13.0) software (Statistical Procedures for Social Sciences; Chicago, Illinois, USA). Wilcoxon and Man-Whitney tests (from non-parametric tests) were performed and p value of 0.05 was considered as significance level.

Results & Discussion

In currents survey, as it can be seen from Figure 2, totally 30% of patients had no cure, 59.2% had complete cure, and 16.8% had partial therapeutic response. 50% in single dose group and 67.7% in ten-day regimen had complete cure with no statistically significant difference.

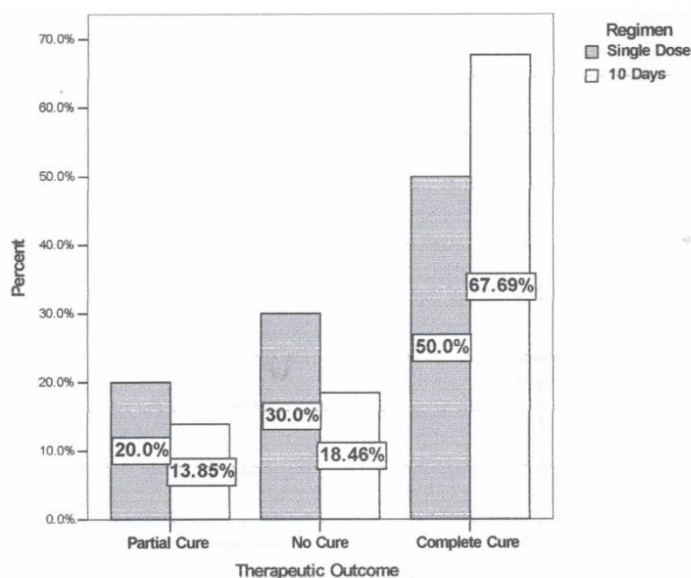


Fig. 2: Therapeutic outcome of the different regimen

The mean patients' final score was 3.95 in ten-day regimen and 5.95 in single dose groups. Despite a better therapeutic outcome in ten-day regimen; but this difference was not statistically significant. Also, recurrence rate was higher in the single dose regimen compare to ten-day regimen group (25% versus 10%). Results are shown in table 1 and figure 3 to 5.

Table 1: symptom scoring during treatment with different regimen

Regimen		Initial Score	4 th Day Score	Final Score
Single Dose	Mean	12.18	6.35	5.95
	N	60	60	60
	Std. Deviation	3.694	5.145	5.382
10 Days	Mean	12.09	7.57	3.95
	N	65	65	65
	Std. Deviation	2.978	3.762	4.233
Total	Mean	12.14	6.98	4.91
	N	125	125	125
	Std. Deviation	3.327	4.503	4.902

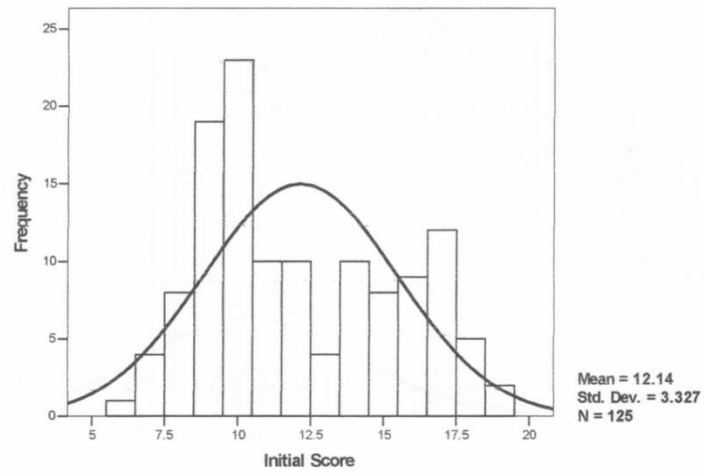


Fig 3: Initial score of symptoms

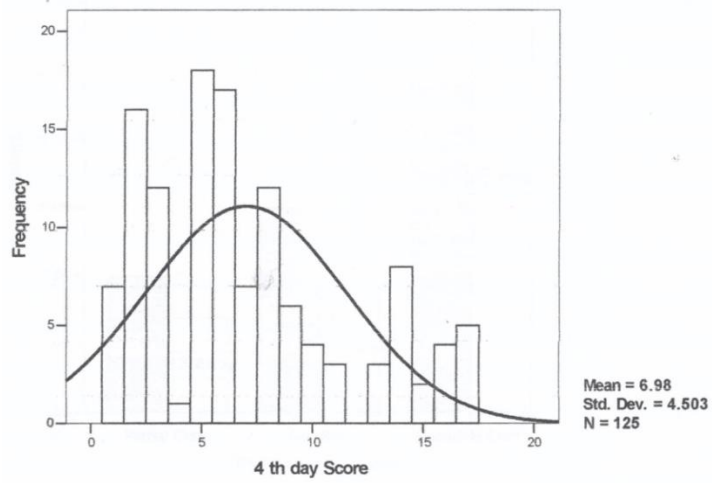


Fig 4: 4th day score of symptoms

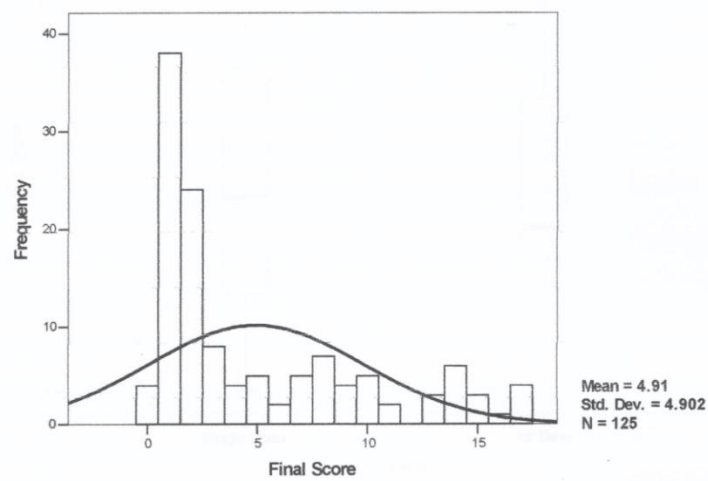


Fig 5: final score of symptoms

Results showed a lower cure rate by 150 mg regimen of fluconazole comparing with those reported by Neves et al., which was about 79% (Neves, 2005). Also Costa and colleagues demonstrated a success rate of 90% which is promising (Costa, 2004). Another study in Italy showed an eradication rate of 76% for 150mg single dose of fluconazole comparing with 66% in Itraconazole. (De Punzio, 2003). Bauters et al. showed that 21% of Candida Species are resistant to fluconazole which means 1 out of every 5 patients (Bauters, 2002). Also single dose of fluconazole in another survey was successful in 69% of cases (Kaplan, 1997). 62% success rate has reported by wooley et al. from Brazil by single dose of fluconazole (Woolley, 1995).

Conclusion

It can be concluded that ten- day regimen has better therapeutic efficacy with a lower recurrence rate. However this difference was not statistically significant. For confirmation of the results, it is recommended to perform further studies with larger sample population.

References

1. Bauters TG, Dhont MA, Temmerman MI, Nelis HJ, 2002; Prevalence of vulvovaginal candidiasis and susceptibility to fluconazole in women. *Am J Obstet Gynecol.* 187(3):569-74.
2. Center for Disease Control and Prevention, 2006; The sexually transmitted disease treatment guidelines. *MMWR* 55; (RR-11):1-94.
3. Costa M, Passos XS, Miranda AT, De Araujo RS, Paula CR, Silva Mdo R, 2004; Correlation of in vitro itraconazol and fluconazole susceptibility with clinical outcome for patients with vulvovaginal candidiasis. *Mycopathologia.* 157(1):43-7.
4. De Punzio C, Garutti P, Mollica G, Nappi C, Piccoli R, Genazzani AR, 2003; Fluconazol 150 mg single dose versus itraconazol 200 mg per day for 3 days in the treatment of acute vaginal candidiasis: a double blind randomized study. *Eur J Obstet Gynecol Reprod Biol.* 106(2):193-7.
5. Foxman B, Muraglia R, Dietz JP, Sobel JD, Wagner J, 2013; Prevalence of recurrent vulvovaginal candidiasis in 5 European countries and the US: results from an internet panel survey. *J Low Genit Tract Dis,* 17(3):340-346.
6. Kaplan B, Rbinerson D, Gibor Y, 1997; Single-dose systemic oral fluconazole for the treatment of vaginal candidiasis. *Int J Gynaecol Obstet.* 57(3):281-6.
7. Kent HL, 1991; Epidemiology of vaginitis. *Am J Obstet Gynecol,* 165:1168-76.
8. McClelland RS, Richardson BA, Hassan WM, et al, 2009; Prospective study of vaginal bacterial flora and other risk factor for vulvovaginal candidiasis. *J Infect Dis* 199:1883-1890.
9. Neves NA, Carvalho LP, Lopes AC, Cruz A, Carvalho EM, 2005; Successful treatment of refractory recurrent vaginal candidiasis with cetirizine plus fluconazole. *J Low Genit Tract Dis.* 9(3): 167-70.
10. Woolley PD, Higgins SP, 1995; Comparison of clotrimazol, fluconazole and itraconazol in vaginal candidiasis. *Br J Clin Pract.* 49(2):65-6.