

# SEXUAL HEALTH AMONG YOUNG SEXUALLY ACTIVE FEMALES WITH VAGINAL CANDIDIASIS

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## ABSTRACT

**Background:** Sexual health among females in a low middle income country like Pakistan substantially affects quality of life. Vaginal Candidiasis is a common infection found among the females leading to discomfort and pain during the sexual intercourse. **Objective:** To determine the sexual health, among young sexually active females with vaginal candidiasis. **Methodology:** It was a cross sectional study conducted in Nawaz Sharif Social Security Teaching Hospital, Lahore from 1st January to 31<sup>st</sup> December 2015. Two hundred sexually active married females between 16 - 22 years of age were selected by non- probability convenience sampling after obtaining their informed verbal consent. Three groups of study subjects were selected, Group A, Candida Positive, Group B, Candida negative and Group C with Vaginitis due to other cause. Complaints which were recorded and analyzed were dyspareunia, itching, vaginal discharge and vulvar soreness. Data through a pretested questionnaire was collected, entered in and analyzed by Statistical Package for Social sciences (SPSS) version 16. **Results:** In group A, 54% have dyspareunia, in group B, 17% were having dyspareunia and in Group C, 29% have dyspareunia. Growth of candida and oral contraceptive use was significantly associated with dyspareunia. ( $p < 0.05$ ). **Conclusion:** This study showed that candida infection affects sexual health and is the major factor that hinders sexual intercourse due to dyspareunia. Use of oral contraceptives is an associated contributing factor in dyspareunia due to recurrent candidiasis.

**Key Words:** Dyspareunia, Candidiasis, Oral contraceptives, Recurrent infection.

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## INTRODUCTION

Dyspareunia among females gives rise to abnormal sexual health and affects the quality of life.<sup>1</sup> Young women now increasingly consult health centers because of dyspareunia, pain during intercourse.<sup>1,2</sup> This condition if ignored develop a chronic pain syndrome, vulvar vestibulitis (VVS), which is a growing problem.<sup>3</sup> An association between VVS and earlier recurrent vulvo-genital candidiasis has been observed.<sup>4,5</sup> An increase in the incidence of vaginal candidiasis has been reported<sup>6,7</sup> but there has been scarcity of evidence dealing with the vaginal candida in young sexually active females. Dyspareunia gives rise to abnormal sexual health which becomes no more pleasurable and safe. In some cases it may lead to low fertility and even break up of families.<sup>6</sup> Couples having such conditions face psychological problems.<sup>7</sup> Poor hygienic practices in low income groups and less educated population is the root cause of the prevalence of candida infection in vagina of the females.<sup>6,7</sup> Lack of clean water in rural areas is a predisposing factor for poor hygienic practices. Candida albicans is the common type of fungus. It is normally present in small amount in the vagina

without giving rise to any symptoms. Women in their reproductive life more often get this infection.<sup>8,9,10</sup> Recurrent infection and large amount of fungal load leads to dyspareunia. In western countries, female population is used to have multiple sexual partners which also increase the incidence of candida infection in female genitalia.<sup>11,12,13</sup> The objective of this study was to determine the sexual health in young sexually active females, with vaginal candidiasis.

## METHODOLOGY

This cross sectional study was carried out in Nawaz Sharif Social Security Teaching Hospital, Lahore from 1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2015. Those sexually active married females who were advised genital examination because of either use of oral contraceptives or any other symptoms with dyspareunia were offered to be a part of the study. Participation was absolutely voluntary and anonymous. Vaginal candidiasis was diagnosed clinically and on vaginal swab for culture. After giving the informed verbal consent, participants completed a pre-tested questionnaire on the use of oral contraceptives, pain on intercourse and frequency, itching, and vaginal discharge. Data was

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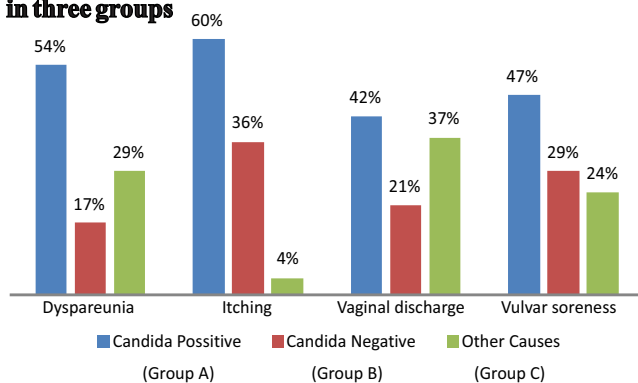
collected, entered and analyzed by using Statistical Package for Social Sciences (SPSS-16). Frequency of complaints like dyspareunia, itching, vaginal discharge and vaginal soreness, was determined in three groups; group A, subjects with vaginal candidiasis, group B, subjects without vaginal candidiasis and group C, subjects with vaginitis due to other causes.

## RESULTS

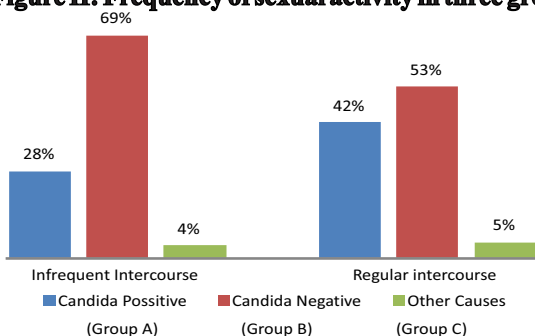
Two hundred sexually active females aged 16-22 years, were included in study. Figure I shows the frequency of different complaints in candida positive (Group A), negative (Group B) and in subjects having vaginitis due to other causes (Group C). Dyspareunia was found in 54% of subjects in group A, 17% of subjects in group B, and 29% of subjects in group C. ( $P=0.05$ ).

The candida growth was found less (28%) among subjects with infrequent sexual activity due to the fear of dyspareunia as compared to 42% in females having regular intercourse. ( $P<0.05$ ) (Figure II). Candidiasis was more common in women who currently used oral contraceptive (61%) as compared to those with past oral contraceptive use. (36%). ( $P<0.05$ ). (Figure III).

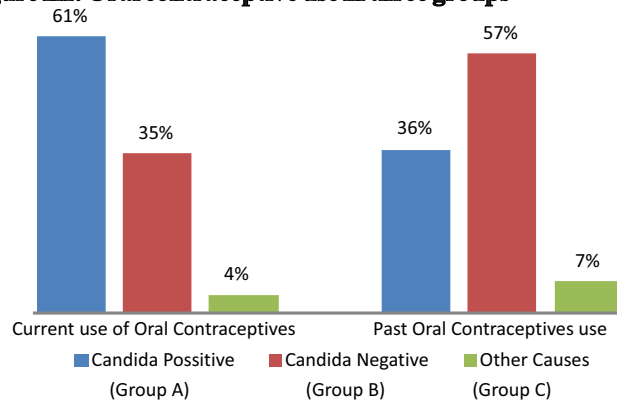
**Figure I: Distribution of complaints in study population in three groups**



**Figure II: Frequency of sexual activity in three groups**



**Figure III: Oral contraceptive use in three groups**



## DISCUSSION

It is reasonable to believe that young women with genital symptoms consult adolescent health centers more often than women without such symptoms. Thus, the present study is not considered to be population based. In order to determine the prevalence of subjects with symptomatic candida, it is necessary to register current signs and symptoms in combination with culture or wet mount analysis of yeast. Only few such studies have been published.<sup>8,9,10</sup> Our results, showed a significant association between dyspareunia and growth of candida infection, and is supported by previous studies.<sup>14,15</sup> Candida was diagnosed in 30% of females, 15-19 years of age in Seattle healthcare clinic and 31% of women at Genito-urinary clinics.<sup>8,9</sup> Pap-smear study showed that candida was most common in women less than 20 years of age.<sup>7</sup> Spinillo et al observed that women on oral contraceptives have a tendency of recurrent candidiasis.<sup>10</sup> Chronic candidiasis may be an initiating factor for VVS.<sup>4,11</sup>

In our current study candidiasis was significantly associated with frequent painful intercourse. Recurrent candidiasis in combination with oral contraceptive use might strain the sensitive vestibular mucosa. It was recently observed that regular intercourse and / or use of oral contraceptive before 16 years of age and for more than 2 years was significantly associated with pain at intercourse.<sup>12,13</sup> A high dose of progesterone for contraceptive purposes, induces a slight thinning of the vaginal epithelial layer and a decreased amount of hydrogen peroxide-producing lactobacilli.<sup>14</sup> In the long run, this situation may affect the superficial nerve endings, which have been shown to over react on mechanical stimuli in women with vulvar vestibulitis.<sup>15</sup>

## CONCLUSION

Our study showed that sexual health among females is affected by vaginal candida infection. It was observed that candida was present in majority of sexually active women having dyspareunia who underwent a genital examination at a healthcare centre in Lahore.

## Conflict of interest

There is no conflict of interest among all authors.

## REFERENCES

1. Goetsch MF. Vulvar vestibulitis: prevalence and historic features in a general gynecologic practice population. *Am J Obstet Gynecol* 1991 Jun;164(6 Pt 1):1609–1616.
2. Danieleson I. Prevalence and incidence of prolonged and severe dyspareunia in women: results from a population study. *Scand J. Public Health* 2003;31(2):113–8.
3. Friedrich EG, Jr. Vulvar vestibulitis syndrome. *J Reprod Med* 1987 Feb;32(2):110–114.
4. Baggish MS, Miklos JR. Vulvar pain syndrome: a review. *Obstet Gynecol Surv* 1995 Aug; 50(8): 618–627.
5. Foxman B. The epidemiology of vulvovaginal candidiasis: risk factors. *Am J Public Health* 1990 Mar;80(3):329–331.
6. Ferrer J. Vaginal candidosis: epidemiological and etiological factors. *Int J Gynaecol Obstet* 2000 Dec;71 (Suppl 1):S21–S27.
7. Adad SJ, de Lima RV, Sawan ZT, Silva ML, de Souza MA, Saldanha JC, Falco VA, da Cunha AH, Murta EF. Frequency of *Trichomonas vaginalis*, *Candida* sp and *Gardnerella vaginalis* in cervical-vaginal smears in four different decades. *Sao Paulo Med J* 2001;119(6):200–205.
8. Eckert LO, Hawes SE, Stevens CE, Koutsky LA, Eschenbach DA, Holmes KK. Vulvovaginal candidiasis: clinical manifestations, risk factors, management algorithm. *Obstet Gynecol* 1998 Nov;92(5):757–765.
9. Odds FC, Bernaerts R. CHROMagar Candida, a new differential isolation medium for presumptive identification of clinically important *Candida* species. *J Clin Microbiol* 1994 Aug;32(8):1923–1929.
10. Spinillo A, Capuzzo E, Nicola S, Baltaro F, Ferrari A, Monaco A. The impact of oral contraception on vulvovaginal candidiasis. *Contraception* 1995 May;51(5):293–297.
11. Geiger AM, Sobel JD. Chronic vulvovaginal candidiasis: characteristics of women with *Candida albicans*, *C. glabrata* and no candida. *Genitourin Med* 1995 Oct;71(5):304–307.
12. Berglund Anna-Lena, Nigaard Linda, Rylander Eva. Vulvar pain, sexual behavior and genital infections in a young population: a pilot study. *Acta Obstet Gynecol Scand* 2002 Aug;81(8):738–742.
13. Bouchard Céline, Brisson Jacques, Fortier Michel, Morin Carol, Blanchette Caty. Use of oral contraceptive pills and vulvar vestibulitis: a case-control study. *Am J Epidemiol* 2002 Aug 1;156(3):254–261.
14. Miller L, Patton DL, Meier A, Thwin SS, Hooton TM, Eschenbach DA. Depomedroxyprogesterone-induced hypoestrogenism and changes in vaginal flora and epithelium. *Obstet Gynecol* 2000 Sep;96(3):431–439.
15. Bohm-Starke N, Hilliges M, Brodda-Jansen G, Rylander E, Torebjörk E. Psychophysical evidence of nociceptor sensitization in vulvar vestibulitis syndrome. *Pain* 2001 Nov;94(2):177–183.