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Knowledge and attitude about cervical screening and HPV vaccine among female medical students of Taif university

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Human Papilloma
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A B S T R A C T

Although human papilloma virus vaccine (HPV) has been available for more than 3 years, a little research has documented the uptake & predictor of vaccination among women in Saudi Arabia in general and young females specifically. The purpose of this cross-sectional survey was to assess the knowledge and attitude about HPV vaccines among female medical students at Taif University. A convenience sample of 194 under graduate medical students at Taif University has completed a paper pencil questionnaire that assessed the knowledge and attitude of cervical screening and HPV vaccine. only about 50 % of our medical students have knowledge about cervical screening same percentage or even knows about human papilloma vaccination. Practice of cervical screening was poor among sexually active student in particular and family members in general.

Introduction

Cervical cancer, known for its mortality and morbidity, is the second most common cancer in women worldwide, with an estimated 493000 new cases and 274000 deaths in 2002 (Kumar *et al.*, 2007). Human papilloma virus (HPV), especially HPV 16 and 18, plays a major role in cervical cancer etiology (Canavan and Doshi, 2000). Risk factors include age, parity, marital status, age at first intercourse, number of sexual partners (Walboomers *et al.*, 1999; FDA, 2006), and cigarette smoking (FDA, 2006; Lowy and Schiller, 2006; Tay, 2012; Nemenqani *et al.*, 2013). Three-fourths of

women will be infected with HPV at least once in their lifetime, and abnormal cervical cytology is a common presentation (Parkin *et al.*, 2002). Early detection of cervical cell abnormalities by Papanicolaou (Pap) smear has reduced the risk of cervical cancer development by allowing timely response to abnormal changes in cervical cytology. Detection rates of squamous cell abnormalities improved with the use of liquid-based thin prep testing of cervical cells, which was approved by the US FDA in 1996 and has now become standard practice internationally (Ho *et al.*, 1995).

Cervical cancer is a malignant neoplasm arising from cells originating in the cervix uteri. One of the most common symptoms of cervical cancer is abnormal vaginal bleeding, but in some cases there may be no obvious symptoms until the cancer has progressed to an advanced stage (Armstrong, 1992).

Treatment usually consists of surgery (including *local excision*) in early stages, and chemotherapy and/or radiotherapy in more advanced stages of the disease.

Cancer screening using the Pap smear can identify precancerous and potentially precancerous changes in cervical cells and tissue. Treatment of high-grade changes can prevent the development of cancer in many cases. In developed countries, the widespread use of cervical screening programs has dramatically reduced the incidence of invasive cervical cancer (Jhingran *et al.*, 2008). HPV infection appears to be a necessary factor in the development of almost all cases (90+ %) of cervical cancer (Armstrong, 1992; Marcus *et al.*, 2005). HPV vaccines effective against the two strains of this large family of viruses that currently cause approximately 70% of cases of cervical cancer, have been licensed in the U.S, Canada, Australia, and the EU (Haverkos *et al.*, 2003; Trimble *et al.*, 2005). Since the vaccines only cover some of the cancer-causing ("high-risk") types of HPV, guidelines recommend that women should seek regular Pap smear screening, even after vaccination (Prokopczyk *et al.*, 1997).

Situation in Saudi Arabia

Cervical cancer is the seventh most frequent cancer in women of Saudi Arabia and the eighth most frequent cancer among women aged between 15 and 44 years (Koutsky, 1997). The crude incidence rate of cervical

cancer in Saudi Arabia was estimated at 2.7/100 000 in 2002, compared with a world rate of 16.0/100 000 (Koutsky, 1997). Current estimates indicate that every year 271 Saudi women are diagnosed with cervical cancer, with 68 (25.1%) cases occurring in women of child-bearing age. Of these 271 women, 143 (52.8%) will die due to the disease, including 27 (39.7%) who are of child-bearing age (Koutsky, 1997). Although the population-based mortality in Saudi Arabia of 1.4/100 000 is much less than the 8.9/100 000 reported for the rest of the world, the fact that over one-third of Saudi women of reproductive age who have cervical cancer will die from the advanced disease in contrasts to the 8.9% of their counterparts worldwide (Armstrong, 1992).

In the few published studies from Saudi Arabia the prevalence of epithelial cell abnormalities in the western region of the country has been variously reported to be 5.0% (Helmerhorst, 2006), 1.5% (WHO/ICO, 2007), and 2.2% (Helmerhorst, 2006). In addition, there are few publications on the prevalence of abnormal cervical cytology in sub fertile women attending fertility clinics. This paucity of data is related to the lack of a national screening program for cervical cancer in Saudi Arabia. As far as Taif region is concerned one retrospective study has been published in The Egyptian journal of hospital Medicine in July 2013 under the heading of Prevalence of Cervical Cellular Abnormalities by Liquid Based Cytology in Taif Province: A Hospital Based Study. In this retrospective chart review study, the records and data of all women were reviewed for whom liquid base cytological studies were performed as screening test to detect the cervical cellular abnormalities at King Abdul Aziz Specialist Hospital, Taif, Saudi Arabia from June 2010 to June 2012. And it was concluded that 79.9% were

symptomatic.25.6% cervical abnormalities and out of them 19.1% of benign nature and 6.5% were premalignant or malignant (Nemenqani *et al.*, 2013).

Methodology

It was cross sectional survey. A convenience sample of 194 under graduate medical students at Taif medical college, Taif University has completed a paper pencil questionnaire that assessed their knowledge and attitude about cervical screening and HPV vaccination. Data were collected over a 15 day period in March 2014, in cooperation with the university authorities and according to the students' academic schedule. The questionnaire was distributed to the medical students in their class. The questionnaire was delivered in English and took about 30 minutes to complete. The purpose and the objectives of the study were explained by the female researchers and students were informed that participation was optional. It was emphasized that all data collected were strictly confidential and students were requested to sign the consent form attached to the questionnaire. The questionnaire covered information about the age and marital status of respondents. The participants were then asked about cervical screening. What is it? Why it is necessary to have cervical screening? How often should we do cervical screening? Does your female family members are having regular cervical screening? Then asked from them about HPV vaccination? When vaccination should start? How many doses? In last after this questionnaire the respondent was asked whether they will recommend the HPV vaccination to their family members or not?

Data analysis

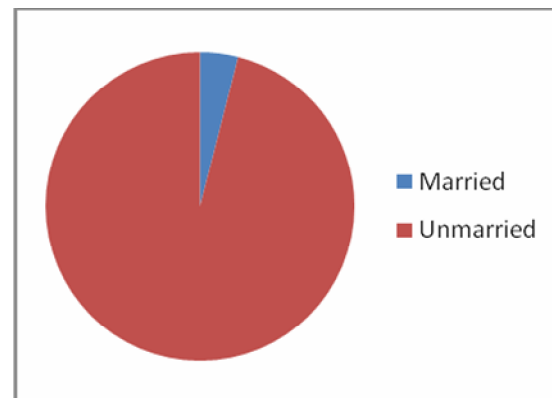
Data were analyzed using SPSS, version 18. Frequencies and percentages are presented

or mean and standard deviation (SD) as appropriate. Bivariate analysis of data was done and the chi-squared test of significance was done where appropriate. $P < 0.05$ was considered statistically significant.

Result and Discussion

Out of 194 respondents only 5 was married and remaining were all unmarried. So it made our unmarried respondent about 97.7%.

Figure.1 Marital status of respondent



Regarding knowledge about cervical screening about 51.00 % and 49 % our medical student were not knowing about cervical screening.

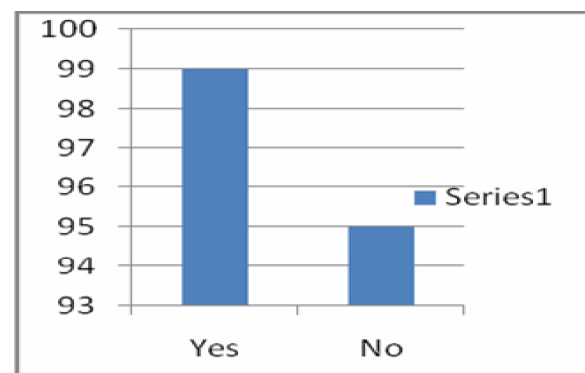


Table.1 Knowledge about cervical screening

Reason for doing cervical cancer	N=99	%
To prevent cervical cancer	39	39.3
To detect abnormal cervical cells	21	21.21
To detect cervical cancer	19	19.19
To detect infection of cervix	20	20.20

Figure.2 Family member had cervical screening

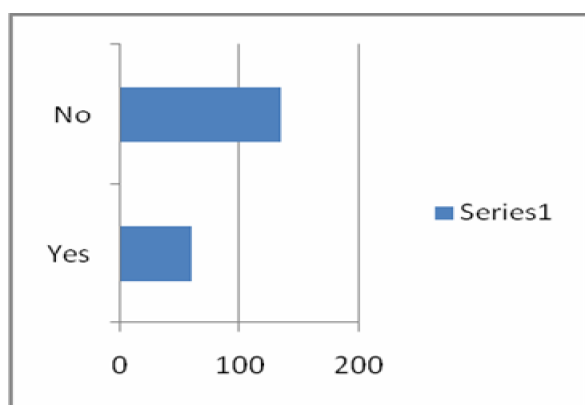


Figure.3 Knowledge about HPV vaccination

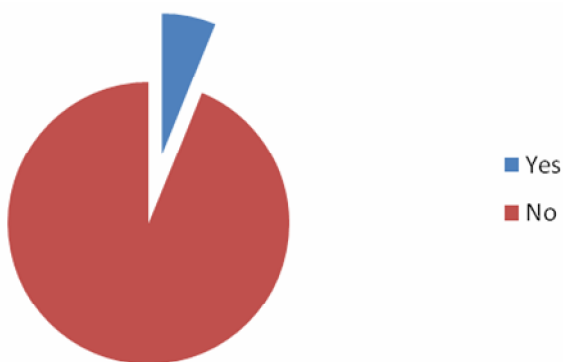


Table.2 when to receive HPV vaccination

When to receive HPV vaccination	N=194	Percentage %
Just after marriage	60	30.92
Do not know	50	25.77
After 3 years of marriage	30	15.46
When cancer is present	27	13.91
After 20 years of age	27	13.91

This study was conducted in medical college students who by our knowledge are more aware of health care issues. The knowledge of cervical screening was expressed by about 60 (30.9%) and about 86 (44.3%) of the respondent were aware of HPV vaccination. these result are somewhat similar with a study which was conducted in Saudi Arabia. cervical screening awareness was of almost percentage but 67.6% of respondent were aware of HPV vaccination where as in this study only 44.3% were having knowledge of HPV vaccination (Sait, 2009). Our results are concordant with the existing literature on HPV vaccine knowledge accessibility in both resource rich and resources limited settings which are that while level of knowledge are generally low, individuals are willing to receive vaccination against HPV (Becker-Dreps, 2010; Arrossi *et al.*, 2012; Winkler *et al.*, 2008; Remes *et al.*, 2012; LaMontagne *et al.*, 2011; Waller *et al.*, 2004; Marshall *et al.*, 2007; Marlow *et al.*, 2007; Coleman *et al.*, 2011; Oh *et al.*, 2010).

In our study though the knowledge about HPV vaccination was of less percentage even that number of participant was not fully aware that when to start, what dose and how many and at what interval this vaccine should be given (Table 2).

This study highlights a lack of understanding regarding the extent of protection against cervical cancer conferred by HPV vaccine, even among an educated population in Saudi Arabia., who could have interest in acquiring such knowledge. Same result has been in one study (McCusker *et al.*, 2013). another study was conducted in Qatar, this cross-sectional interview-based study was conducted in 2008 among 500 women at 5 randomly selected primary health care centers in Qatar to determine

their knowledge, attitude and practices regarding cervical cancer and screening.

It was concluded in that study that Knowledge and practice was inadequate among those under 30 years old, those recently married and those with a lower education level. Same result was found here in our study except that the educational level was not low but still the knowledge was inadequate (Sairaf and Mohamed, 2009).

Conclusion

In conclusion we can say that there was fair knowledge of cervical screening among medical students in this study but the practice of cervical screening was poor and family members in general. These data also suggested that these students somehow are aware of HPV vaccination. Benefits of the HPV vaccination may not be apparent. Knowledge of HPV vaccination could result in a likely choice of HPV vaccination and would subsequently reduce the incidence of cervical cancer. Improving HPV vaccination rates in Saudi women require culturally competent and sensitive approaches which must address ethnic –specific barriers. It means the general knowledge of cervical screening was good and attitude was fair, but this did not translate good practice.

Recommendations

Prevention is the mainstay of treatment of cervical Cancer. It can be done by following ways. By public awareness program at community Levels and all P.H.C.C. to motivate the ladies for cervical screening (PAP SMEAR) at their public sector hospital. Awareness program for school and college going girls of 15 years of age about vaccination against human papilloma virus. Provision of vaccine against human papilloma virus of all women of 15 years of age and over.

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