

RESEARCH COMMUNICATION

Evaluation of Cervical Cancer Risk-factors in Women referred to Yazd-Iran Hospitals from 2002 to 2009

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Abstract

Background: Although cervical cancer is a preventable disease, its prevalence is increasing in many developing countries. The aim of this study was to evaluate risk factors. **Materials and Methods:** This cross-sectional study was conducted on 100 cervical cancer cases according to their pathology reports in Yazd city. The patients were referred to 4 gynecological centers. Demographic data (age, age at marriage, number of marriages and spouses, age at first pregnancy, frequency of pregnancies and term labors, positive history of smoking and Pap smear findings) were documented by interview, questionnaire and reviewing patients documents. The data were analyzed with SPSS software. **Results:** Mean age of the patients was 53.6 years. Mean age of marriage and first pregnancy was 15.2 and 16.6; respectively. Twenty percent (20%) of the cases married more than once and husbands of 38 patients (38%) had another wife too. Frequency of pregnancies and term labors was 7.4 and 6.4 in our patients. Some 17% of the patients had history of smoking; while 53% of them were passive smokers. Also only 2% of our patients have done Pap smear before diagnosis. **Discussion:** The important risk factors of patients with cervical cancer were as follows: Marriage at young age (15.2%), high mean parity (7.4), low mean age at first pregnancy (16.2 year), smoking, and not doing Pap smear. **Conclusion:** There is important association between mass screening program with Pap smear and decreasing cervical cancer. Thus we should increase our women knowledge about all of risk-factors of cervical cancer and get them clues about regular pap smears.

Keywords: Cervical cancer - risk factors - pap smear - education

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Introduction

Invasive cervical cancer is considered as a preventable cancer due to long period before invasion, efficacy of screening programs and proper therapy of primary lesions (Krivak et al., 2007). In United States, cervical cancer is the 6th common solid tumor, while it's the 2nd common cancer among women in developing countries (Krivak et al., 2007). Smoking (Madeleine et al., 2001), genetics (Horn et al., 2002; Au et al., 2003; Huang et al., 2005), having multiple sexual partners (Franceschi et al., 2002), high parity (Munoz et al., 2002) and first intercourse at young age (Merill et al., 2005; Karimi Zarchi et al., 2009) are reported as risk factors of cancer of cervix. Madeleine et.al showed that OCP is an accumulating dose-dependent risk factor of cervical cancer use of it for more than 12 years leads to 5-fold increase of incidence of cervical cancer. (Madeleine et al., 2001)

For the 1st time in 1940, cytological studies on cells of uterus and vagina was recommended as a diagnostic method of cervical cancer by Papanicolou and Traut, which nowadays proved to be the best and most worthy screening test, leads to decrease the incidence and

mortality rate of invasive cervical cancer.

A negative Pap smear may decrease risk of the cancer up to 45% and 9 negative tests long-life decrease the risk up to 99% (Bristow et al., 2003). Lack of regular screening increases the risk of cancer of cervix up to 2-6 times. (Krivak et al., 2007). There are a few articles about cervical cancer and frequency of risk factors in Iran. The aim of this study was to assess the frequency of risk factors of cervical cancer in affected women (new case since to 2002 up to now) in 4 hospitals of Yazd city.

Materials and Methods

This study was conducted on 100 cases of invasive cervical cancer confirmed by pathologists. The incidence of all cases was since 2002 until 2009. Referring to the hospitals documents, we found 110 eligible cases, but 10 were excluded due to death, incomplete data and no access to them due to address change. Demographic data and main variables were gathered through questionnaire, interview, telephone calls and reviewing the hospital documents. Age, age of marriage, 1st intercourse and 1st pregnancy, parity and number of term labors, history of

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smoking, and history of marriage more than once or having multiple sexual partners and history of Pap smear during last 10 years were assessed.

According to Iranian culture and findings, age of marriage was considered equal to age of first intercourse. As having multiple sexual partners couldn't be assessed reliably, only history of marriage more than once was considered as a criterion of having multiple sexual partners. History of smoking was divided into passive and active groups. The data was analyzed by SPSS software.

Results

In this study, 100 cervical cancer cases of recent 7 years were evaluated. Thirty-five percent of the patients were citizen of Yazd and the rest of south provinces of Iran. Mean age of our patients was 53.6 years. Mean age of marriage (= first intercourse) was 15.2. Eighty-four percent of patients married at age under 18. It should be noted that in 89% of the cases, 1st pregnancy occurred at age under 20. Mean parity and term labors were 7.4 and 6.35; respectively. However, 86% of the cases were multi pare (>5) and 77% of them had history of more than 5 term labors. 20% of the women married more than once and husbands of 38 patients (38%) had another wife too. About 17 cases (17%) were smoker at the time of study. It should be noted that 53% of the cases were passive smoker. Only 2% of the women underwent Pap smear and unfortunately the rest didn't. 79%, 19% and 2% of the cases were SCC, adenocarcinoma and adenosquamous cell carcinoma; respectively. 17% and 83% of the cases were in early and advanced stage of their diseases; respectively.

Discussion

Cervical cancer is more prevalent in developing countries such as Iran than developed ones. In north of Iran, this malignancy is common like stomach and esophagus cancers (Krivak et al., 2007). Mean age of cervical cancer incidence is reported 52 years in references (Bristow 2003), which was similar to our findings (53.6 years). There was a relationship between age of 1st intercourse and cancer of cervix in previous studies (Madeleine et al., 2001; Munoz et al., 2002; Au et al., 2003; Merrill et al., 2005) and age of 1st intercourse under 18 reported as an important risk factor.

Previous studies on relationship between marriage status and having multiple sexual partners has a role in cervical

Table 1. Distribution of Demographic Data, History of Marriage and Pregnancy in Cervical Cancer Cases (N=100)

Variables	Number	Percent
Age of marriage<18	84	84%
Frequency of marriage	20	20%
Age of 1 st pregnancy<20	89	89%
Parity>5	86	86%
Term labor>5	77	77%
Smoking	70	70%
Husband's marriage>1	38	38%
Pap Smear	2	2%

cancer. In our study, about 20% of cases married more than once and husbands of 38% of the cases had another sexual partner too, which seems important and can be considered as a criterion of having multiple sexual partner. 1st pregnancy at young age (≤ 20 years) increases risk of cervical and endometrial cancers (9). 89% of our patients had their 1st pregnancy at young age too (<20 years).

Multi parity (≥ 7) is known as a risk factor of SCC of cervix (Munoz et al., 2002), also in our patients. Less pregnancy have an important role in decreasing mortality and incidence rate of this cancer. Many studies showed that smoking is a risk factor of cancer of cervix (esp. SCC type) (Madeleine et al., 2001; Au et al., 2003). In our study, 20% of the patients were passive smokers. We had some limits in our study such as incomplete data and low compliant women to enter the study.

There is important association between mass screening program with Pap smear and decreasing cervical cancer. Thus we should increase our women acknowledgements about all of risk-factors of cervical cancer and get them the clues about regular pap smear.

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