

RESEARCH COMMUNICATION

Inadequate Knowledge Levels of Turkish Male University Students about Testicular Self-Examination

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Abstract

Introduction: Testicular cancer occurs in men aged between 15-35, accounting for 1% of all male cancers. The most common symptom is a painless swelling in the early period, so it is important for individuals to be conscious about and perform testicular self-examination. The aim of this study was to determine the knowledge and performance of testicular self-examination (TSE) in male university students. **Methods:** The target population of the study consisted of 275 male university students aged between 20-25. Data were collected using a 27 item-questionnaire developed by the investigators consisting of 3 sections: 1) socio-demographic characteristics; 2) risk factors for testicular cancer; 3) practices related to TSE. The data obtained were analyzed using frequency distribution and percentages. **Results:** 88% of the students (n=242) reported having no knowledge of TSE, whereas 36% (n=12) of the remaining 12% (n=33) reported having performed TSE. With regard to the reasons for non-performance, 88% (n=242) of the participants said they did not know about TSE, 6% (n=17) said they did not attach importance to TSE and 4% (n=11) were afraid. **Conclusion:** The results of our study demonstrated that adolescent males should be educated by nurses about testicular tumors and their symptoms as well as TSE performance.

Keywords: Testicular cancer - early detection - self-examination - adolescent and young adult health

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Introduction

Testicular cancer is relatively common in young males aged between 15-35, with an ever increasing incidence (Rosella, 1994; Burak, 1998; Khadra, 2002; Kleir, 2004; Nguyen and Ellison, 2004; McCullagh et al., 2005). The reported annual incidence rate was 5.2 per 100,000 persons for all races during 1966 to 2000. In 2004, approximately 9000 new testicular cancer cases were diagnosed in the United States.

According to the cancer statistics in Turkey, the most common locations in urologic cancers are the prostate, bladder, testicles, kidney, ureter and renal pelvis. The most common male cancers are prostate (5.97/100,000), bladder (5.93), kidney (1.49), testicular (1.34), ureteral (0.4) and renal pelvic cancers (0.3). However, the presence of inconsistency of cancer occurrence reports and problems in keeping cancer records in our country, as in other countries, can not be ignored. According to the American cancer statistics, the most common locations in urologic cancers are prostate (135.6), bladder (31.8), kidney and renal pelvis (17.2), testicles (5.3), penis (0.8) and ureter (0.7) (Aydn, 2007). Early detection is extremely important for preventing extension of the tumor stage, particularly with the nonseminomas, or more aggressive and rapidly growing testicular tumors. The literature recommends performing a regular testicular self examination for early

detection of testicular carcinoma (Wynd, 2002; Nguyen and Ellison, 2004; McCullagh et al., 2005).

The American Cancer Society (2001) recommends TSE for men, particularly at high risk for testicular cancer. Medical-Surgical and oncology nurses are in a perfect position to provide TSE education to young men beginning in adolescence and continuing until their mid-30s. All males should be educated about testicular carcinoma and TSE during every visit to their primary health care provider (Brown, 2004).

The most common symptom of testicular cancer is a painless swelling in one of the testicles. Since the testicular swelling can be detected by scanning methods in the early period, it is important for the individual to be conscious about and to perform testicular self-examination. It is recommended for adolescent males to examine each testicle with both hands during a hot bath when the scrotum is looser (Finney et al., 1995; Wynd, 2002; Kleir, 2004). It is emphasized that men who perform a regular testicular self-examination can get familiar with the normal testicular structure and detect a change in the early period (Khadra and Oakeshott, 2002; Kleir, 2004; McCullagh, 2005). However, young men can regard self-manipulation as a sexual activity, thus being unwilling to hold the testicles and to get the education (Lantz, 2001). There are conflicting views about the necessity of a regular performance of TSE in the literature. Some

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research has suggested that TSE may provoke unnecessary medical intervention and anxiety (Wynd , 2002). Best et al. (1996) conducted an experimental study to determine the knowledge of 1289 high school boys about TSE and testicular carcinoma. The comparison between the experimental and control groups demonstrated that the educated group had a higher level of knowledge whereas the anxiety levels of both groups were similar (Wynd , 2002). Early diagnosis can positively affect the life span of patients and can facilitate coping with the disease in testicular cancer. The importance of education of young men about testicular cancer and TSE by health professionals and educators is particularly emphasized. The aim of this study was to determine the knowledge and performance of TSE in male university students, focusing on: 1) do young men know about testicular self-examination?; 2) do young men perform testicular self examination?; and 3) do young men who know about testicular self examination actually perform it?

Materials and Methods

This descriptive and cross-sectional study was carried out with male students studying at Istanbul University. The study sample consisted of 275 male university students aged between 20-25. Data were collected using a 27-item questionnaire developed by the investigators after a review of the literature. The questionnaire consisted of three sections: 1) socio-demographic characteristics, 2) Risk factors for testicular cancer, 3) practices related to TSE.

Socio-demographic characteristics included age, field of study and accommodation status. Risk factors for testicular cancer include smoking, alcohol consumption, age at first sexual intercourse, condom use, regular sexual activity, family history of testicular cancer and history of problems with testicles. Questions about TSE practice were as follows: Do you know about TSE, do you perform TSE, how often do you perform TSE and how did you learn to perform TSE. The data obtained were analyzed using frequency distribution and percentages. The results are presented in Tables.

The questionnaire form was pilot tested on a sample of 100 participants in order to check clarity of the items. No revisions were necessary.

Prior to data collection, participants were informed about the aim of the study. The volunteers who consented to participate in the study were asked to fill in the questionnaire. The questionnaire took about 10-15 minutes to complete.

Results

Concerning the age distribution of the students, 58% were (n=160) aged 20-21 years. It was also found that 34% (n=93) of the participants were studying at the Faculty of Engineering, 11% (n=31) were studying at vocational school of health services, and 47% (n=129) were staying in student dormitories.

With regard to the risk factors for testicular cancer, 48% of the students (n=132) were smokers and 67% (n=186) were alcohol drinkers. 70% (n=192) said they

Table 1. Risk Factors for Testicular Cancer (N=275)

Risk Factors		n	%
Smoking	Yes	132	48
	No	143	52
Alcohol consumption	Yes	186	67
	No	89	33
Age at first sexual intercourse	14-16	80	29
	17-19	136	52
	20-22	5	2
	No reply	46	17
Condom use	Yes	192	70
	No	83	30
Regular sexual activity	Yes	71	26
	No	204	74
Family history of testicular cancer	Yes	4	1
	No	271	99
Problems with testicles	Yes	26	10
	No	249	90

Table 2. Knowledge and Performance of Testicular Self-Examination (TES) (N=275)

Knowledge and performance of TES		n	%
Have you ever heard of TSE?	Yes	53	19
	No	222	81
Do you know how to perform TSE?	Yes	33	12
	No	242	88
Do you perform TSE?	Yes	12	36
	No	21	64
Reasons for not performing TSE *	Knowledge	242	88
	I felt guilty	5	2
	No importance	17	6
How did you learn to perform TSE * ?	I was afraid	11	4
	Friends	11	16
	Medical staff	9	13
	School	28	40
	TV	14	20
	Magazines	8	11

*respondents were able to select more than one option

used condoms during sexual intercourse whereas 74% (n=204) reported not having a regular sexual activity. 1% of the students (n=4) had a family history of cancer. 10% of the students (n=26) reported having problems with their testicles (Table 1).

Some 88% of the students (n=242) reported having no knowledge of TSE, whereas 36% (n=12) of the remaining 12% (n=33) who knew about TSE reported having performed it. With regard to the reasons for not performing TSE, 88% (n=242) of the participants said they did not know about TSE, 6% (n=17) said they did not attach importance to TSE and 4% (n=11) were afraid. The majority of the students who performed TSE reported not performing it on a monthly basis. When the students were asked how they learned to perform TSE, 20% (n=14) said they had learned it from television whereas 16% (n=11) had learned it from their friends (Table 2).

Discussion

In this study, the knowledge and performance of testicular self-examination (TSE) in male university students were determined. It was found that 88% of the students constituting the study sample did not know about

testicular self examination. It is known that the time from the first recognition of testicular cancer by the patient to the definitive treatment is correlated with the incidence of metastases. The importance of the patient awareness and routine performance of testicular self examination is fairly obvious.

This finding is consistent with many other studies showing infrequent TSE especially in men whose younger ages place them at highest risk for testicular cancer. Barling and Lehman (1999) found that 83 % of male college students, aged between 18 – 25 years, reported irregular or nonexistent TSE performance. In a study by Tichler et al, 717 male soldiers were asked about TSE and only 2 % of these young man practiced TSE regularly , whereas 52% of the men rarely or never examined their testicles for nodules. In a study by Şirin et al., only 14.2 % of the male participants stated that they knew about self examination of the testis, and of those men, 33.3 % reported doing regular testis examination each month (Sirin et al.,2006). In a study by Wynd et al , 64% of the young men rarely or never practiced TSE (Wynd, 2002). A study by Handy and Sankee demonstrated that 67% of the participants sometimes performed TSE whereas 14% never performed TSE (Handy and Sankar, 2008).

It is known that testicular cancer affects young men aged between 15-35. The unawareness about the importance of the disease and lack of knowledge among young men about the fact that early diagnosis significantly decreases mortality risk and the need for invasive treatment are common problems. Testicular self-examination is a simple procedure. Regular and accurate TSE can decrease cancer risk. The American Cancer Society (2000) predicted 7200 new cases and 400 deaths annually from testicular cancer in the United States in the next several years. Early detection is extremely important for preventing extension of the tumor stage, particularly with the nonseminomas, or more aggressive and rapidly growing testicular tumors (Ward et al., 2005).

Because the key to successful intervention in testicular cancer is early detection ,several organization , including the American Cancer Society and American Urological Association, recommend that physicians include testicular examination as part routine physicals, Recommendations also exist that Physicians and nurses providers teach and encourage TSE to their male patients between the ages 15-35 years (Ward et al., 2005).

In the literature, age at first sexual intercourse was 16.2 years in Nigeria, 16.8 years in France, 15.8 years in the USA and 16.8 years in Germany. In a study by Aras et al, age at first sexual intercourse was found to be 17 among men in our country. The age at first sexual intercourse, found in this study, was similar to those reported for developed countries. Condom use at first sexual intercourse among adolescents was found to be 86% in Sweden and 82.5% in England. In the study by Aras et al, condom use at first sexual intercourse was found to be 55.7% among men. It is promising that condom use was found to be higher in our study than that found in another study conducted in our country. (Aras et al.,2005). Given that infection is a risk factor for testicular cancer and condom use during sexual intercourse is effective

in the prevention of infection, higher level of protected sexual intercourse can be considered as a promising result.

He higher familial risk for testicular cancer among brothers than father –son pairs may suggest the involvement of a recessive mode of inheritance or an X-linked susceptibility locus in the actiology of testicular cancer , consistent with the segregation analysisand gene mapping efforts.(Hemminki and Chen, 2006).

A majority of the students who knew how to perform TSE reported having learnt it in school. In a study by Handy and Snaker, 40% of the participants reported having learnt how to perform TSE from GPs, 30% in school, 26% from Genitourinary medicine clinics. 2% reported having learnt it from magazines and 1% from health education brochures. Similar results were also found in our study (Handy and Sankar, 2008). Regular and effective organization of education programs through highly effective media is recommended (Wynd, 2002).

Adolescent males should be educated about the importance of early diagnosis and treatment. Counseling should be carried out to teach and increase self-efficacy and skills to perform TSE. It is recommended that students be provided information about TSE by health workers in school and through visual and print media and that education programs be organized periodically to turn TSE into a behavior (Rosella, 1994; Finney et al.,1995; Burak, 1998).

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