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) (Aydın, 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 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

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<th>Table 1. Risk Factors for Testicular Cancer (N=275)</th>
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<th>Table 2. Knowledge and Performance of Testicular Self-Examination (TES) (N=275)</th>
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<td>Knowledge and performance of TES</td>
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<td>Have you ever heard of TSE?</td>
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<td>Do you know how to perform TSE?</td>
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<td>Do you perform TSE?</td>
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*respondents were able to select more than one option
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 men 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 (Şirin 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 whereas14% 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 agressive 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 inculcate 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 all.,1995;

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