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RESEARCH ARTICLE

Knowledge, attitude and practices of Saudi Men towards testicular cancer and testicular self-examination in The Western Region of Saudi Arabia.

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Abstract

Background: Since early detection is the key for a better prognosis in different types of malignancies, this paper was conducted to determine the level of knowledge, attitude and practice of testicular cancer and testicular self-examination among the population in the western region of Saudi Arabia.

Materials and Methods: This cross-sectional study was conducted in March 2016 at King Abdullah Sports City and Red Sea Mall Jeddah, Saudi Arabia, where 1600 male subjects aging 15 and above were interviewed, and the data were collected using a questionnaire.

Results: It was determined in this study that knowledge level about TC is extremely insufficient where 61.36% reported lack of knowledge about TC. It also showed how lack of awareness of TSE and poor health education can reflect on the knowledge and practice of TSE where only 16.88% were educated.

Conclusion: it is highly recommended to encourage and promote health education programs among the public regarding how common TC is in young males, as well as focus on the importance of practicing TSE regularly. It is also recommended that health care professionals should educate and periodically evaluate the role of such practices when it comes to early detection and better management of TC.

Introduction:-

Testicular cancer (TC), is the most common malignancy in men between 15 and 35 years of age, accounting for 20% cancer diagnosed in men within this age group [1]. Yet, it represents only 1% of all malignancy in men [2]. The international agency for research on cancer in 2012, produced an estimate of 55266 TC cases worldwide, with a next 5 years prevalence rate of 214666 cases [3].

Not many decades ago, TC's mortality rate reached 11% of all cancer related mortality, with a 5-year survival rate of 64% [4], More recently, however, with the new diagnostic and therapeutic modalities at hand, a new dawn has emerged in terms of prognosis, making TC one of the most curable cancers in adults, with an overall survival rate reaching >95% in 10 years [5].

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Early detection is becoming, the only way to improve outcomes in accordance with the current successful therapeutic algorithm.

Determinants of early detection and diagnosis of TC are two-fold, one: Knowledge and oncology awareness of the male population, especially the young sector, and two: Performance of regular monthly testicular self-examination (TSE) as one of the first signs of TC is often a lump or swelling in the testis [6].

Conflicting views are found in the literature about whether TSE should be encouraged to the public, as some suggest that the costs outweigh the benefits, both because of the relatively low incidence compared to other health concerns and because of the anxiety they feel such a focus would provoke [7]. In 1996, Best et al, conducted a study by providing information about TSE to 1,286 high school male students and compared them to a control group after 6 and 18 months. The comparison demonstrated that while the knowledge level increased significantly, the anxiety level did not [8].

Some medical associations, such as the American Urological Association recommend TSE for the early detection of TC [9]. The American cancer society (ACS) recommends that examining a man's testicles should be a part of general physical exam, as well as a cancer-related check-up. Regular TSE has not been adequately evaluated enough to establish that it indeed lowers the risk of TC mortality. Thus, the ACS does not recommend regular TSE for all men. Still, some recommend that all men examine their testicles monthly after puberty [10].

In Saudi Arabia, few studies have been conducted to assess level of awareness about TC and TSE, and as a result, no general recommendations nor acknowledged expert opinions in the country addressed the issue. Therefore, the present study was conducted to assess the knowledge level, attitudes and practices of the general population about TC and TSE inSaudi Arabia.

Methodology and Materials:-

This is a cross-sectional study, which was conducted during March, 2016, in 2 public venues (King Abdullah Sports City, and Red Sea Mall) in Jeddah, Saudi Arabia. A total of 1600 randomly selected male subjects were interviewed by Medical Students.

Males above 15 years were interviewed. Exclusion criteria included the inability to perform TSE (e.g. bilateral undescended testis, hand motility disorders, etc.), andmales with severe mental disability.

Data collecting tools:-

A questionnaire was utilized to help collect data. It consisted of three sections. The first covered subjects' demographic characteristics. The second addressed questions regarding knowledge ofTC, while thethird addressed participants' knowledge, attitude and practices of TSE.All completed forms were anonymous.

Statistical analysis:-

Levels of knowledge were calculated as total scores by setting different code systems to positive questions (Disagree = 0, Do not know = 1, Agree = 2) and negative questions (Disagree = 2, Do not know = 1, Agree = 0) then by transforming the scores into percentages and classifying into weak (<50%), average (50-75%), and high (>75%). Statistical analysis was performed with Statistical Package for Social Sciences (SPSS version 22.0). $P<0.001$ was set as statistically significant in comparison.

Results:-

The demographic characteristics (Age, Marital Status, Education and Occupation) of the participants are shown in table 1.

Table (1):- The frequency and percentage of demographic characteristics (Age, Marital Status, Education and Occupation)		
	N	%
Age		
15-19	371	23.19
20-24	495	30.94
25-29	317	19.81
30-34	153	9.56
35-39	113	7.06
>40	151	9.44
Range		
Mean±SD	±	
Marital Status		
Single	1084	67.75
Married	483	30.19
Divorced	30	1.88
Widower	3	0.19
Education		
Middle School	112	7.00
High School	722	45.13
Under-graduate	724	45.25
Post-graduate	42	2.63
Occupation		
Student	597	37.31
Employed	767	47.94
Unemployed	236	14.75

TC Knowledge:-

61.36% of the interviewed males (n=978) did not know that it is possible to get TC. Less than 10% had received some form of education regarding TC (Table 2). With regard to the knowledge of risk factors for Testicular Cancer, table 2shows responses reflecting the knowledge about symptoms and risk factors of TC.

Table (2):- The frequency and percentage of Risk Factors of TC and Symptoms of TC		
	N	%
Risk factors of TC		
Age	225	14.06
Prior trauma to the testis	611	38.19
Undescended testicle	299	18.69
Race and ethnicity	179	11.19
Family history of TC	470	29.38
Smoking	524	32.75
Have you been educated on the risks of developing TC?		
Yes	148	9.75
No	1452	90.75
Symptoms of TC		
Painless lumps on the testicle	377	23.56
Swelling and hardness of the testicle	839	52.44
Aching in the lower abdomen	364	22.75
Painful lumps on the testicle	439	27.44
Redness and itchiness of the scrotum	313	19.6
Nausea and fatigue	139	8.69

A general lack of knowledge was evident from the significantly high prevalence of answering “I don’t know” to all three questions (P<0.001) (Table 3).

Table (3):- The frequency and percentage of response to the following questions:								
Items		Agree	Disagree	Do not know	Weight	%	Chi-square	
							X^2	P-value
Do you think that TC has a cure?	**N**	757	47	796	2310	72.1875	666.639	<0.001*
	%	47.31	2.94	49.75				
If someone is diagnosed with TC, will he become infertile?	**N**	452	280	868	1772	55.375	342.740	<0.001*
	%	28.25	17.50	54.25				
TC can be prevented.	**N**	737	144	719	2193	68.53125	426.624	<0.001*
	%	46.06	9.00	44.94				

Knowledge, attitude and practices of TSE:-

Table 4 highlights the responses of subjects about knowledge, attitude and practice of TSE.

Only 16.88% (n=270) stated that they had been educated regarding the benefits of TSE. Among those who received education, 54.98% gained this knowledge either at school or through a physician. More than 90% of the participant men had never performed a TSE.

Table (4):- The frequency and percentage of Knowledge and practice of TSE		
	N	%
Have you heard of TSE?		
Yes	313	19.56
No	1287	80.44
Have you ever been taught how to perform TSE?		
Yes	161	10.06
No	1439	89.94
Have you ever performed TSE?		
Yes	182	11.38
No	1418	88.63
Have often do you perform TSE?		
Never	1449	90.56
Once a year	68	4.25
Every 6 months	32	2.00
Every 3 months	16	1.00
Every 1 month	15	0.94
Often (every week)	20	1.25
Have you ever been educated on the benefits of TSE?		
Yes	270	16.88
No	1330	83.13
If you have been educated, please indicate how this education was obtained?		
No, I have not been educated	58	21.40
At school	57	21.03
By a doctor	92	33.95
Other	64	23.62

Discussion:-

This represents the first study; in Saudi Arabia to examine the knowledge, levels of practice and attitude towards TC and TSE. Several other studies have been conducted, in other countries, involving public audience [11], medical students [12], hospital technicians [13] and residents [14, 15]as subjects.

TC Knowledge:-

Our study subjects have shown significantly low levels of knowledge towards TC, where 93% have a weak level of knowledge. For example, 38.19% believed that prior trauma to the testis is a risk factor and 52.56% and 19.6%

believed that redness and itchiness of the scrotum is a symptom of TC. This lack of knowledge can be explained by the educational level of the majority of the subjects where 90.38% are either undergraduates or high school graduates (P<0.001)

The percentage of subjects who has heard of TC in the current study is much lower than sohwn in another study that was conducted among technicians working in hospitals, which showed 63.6% having heard about TC. Given the fact that such subjects work in the health care field, a degree of higher awareness level is to be expected [13]. Furthermore, a different questionnaire was used to assess TC-related knowledge in the two studies

As for knowledge about the treatment and prevention of TC, a similar low level of knowledge was demonstrated. A significant percentage of subjects responded with "I don't know" to questions about likelihood of TC cure (49.75%) and prevention(44.9%).

TSE Knowledge, Practice and Attitude:-

The current study suggests a low level of knowledge about TSE among Saudi men, with 19.56% having heard about TSE, and only 11.38% having ever performed it. These results are in keeping with even lower TSE knowledge and practice levels which were previously reported among young European men and medical students [11, 12]

Among the 16.88% who were educated about TSE, 33.95% stated having received their education from a physician. These findings support the role of physicians in teaching TSE. Unfortunately physician's participation in patient TSE education has been variable in different reports. A study involving pediatric residents revealed a high prevalence of 40% who regularly engaged in teaching TSE to their patients [14]. However, an earlier study showed only 17.5% of physicians taught TSE to adolescent male patients on a routine basis [15]. Such an increase in prevalence of teaching is promising, but a similar study in our country is necessary to state a definite comparison.

Conclusion:-

The results of this study shows a great lack in knowledge level about TC. It also demonstrates how the lack of knowledge and awareness of TSE and poor spread of education are primary barriers to TSE. Given the excellent prognosis of TC when detected early, it would be advisable to direct attention towards public education programs. Furthermore, emphasis should be given to patient education regarding TC and TSE but healthcare professionals.

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