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Family Physicians' Awareness of Skin Cancer and Sun Protection Practices

Aile Hekimlerinin Cilt Kanseri Farkındalıkları ve Güneşten Korunma Davranışları

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ABSTRACT

Objective: The objective of this study was to determine the knowledge level of family physicians about skin cancer and their attitudes and behaviors about sun protection. **Methods:** The sample of this study was composed of 295 family physicians who worked in Samsun province and participated in in-service trainings organized by the Provincial Health Directorate in March 2019. A questionnaire form consisting of questions on sociodemographic characteristics, attitudes and behaviors about sun protection was applied to the participants. **Result:** A total of 295 family physicians, 64.7% male and 35.3% female, participated in the study. Most of the physicians (87.8%) expressed that they tried to protect from sunlight. Women (68.3%) used sunscreen lotions/creams more frequently than men (41.4%). Those who had 2 and more severe sunburns throughout their lifetime (51.5%) stated that they described themselves at higher risk than those who did not (36.2%) which was statistically significant ($p<0.05$). The reasons of the physicians for application to a dermatologist were: 47(15.9%) had asymmetrically shaped, irregularly structured moles larger than 5 mm, 37(12.5%) had suspected presence of moles, 11(3.7%) wanted whole body examination for moles, 20(6.8%) requested advice on daily skin care and prevention of skin aging. **Conclusion:** Awareness studies should be carried out on the harmful effects of the sun and early diagnosis of skin cancer especially for family physicians, healthcare professionals and other parts of the society. In addition, considering that visual evaluation has a role in the diagnosis of skin cancer, it will be useful for family physicians to inform their patients about the detrimental effects of the sun and self-skin examination.

Key words: Family physicians, sun protection, skin cancer

ÖZET

Amaç: Bu çalışmada aile hekimlerinin cilt kanserleri hakkındaki bilgi düzeylerinin ve güneşten korunma ile ilgili tutum ve davranışlarının belirlenmesi amaçlanmıştır. **Metod:** Bu çalışma Samsun ilinde görev yapan ve İl Sağlık Müdürlüğünün 2019 yılı Mart ayı içerisinde düzenlediği hizmet içi eğitimlere katılan 295 aile hekimi ile yapıldı. Katılımcılara sosyodemografik özellikler ile güneşten korunma konusundaki tutum ve davranışlarına yönelik sorulardan oluşan anket formu uygulandı. **Bulgular:** Çalışmaya %64,7'si erkek, %35,3'ü kadın toplam 295 aile hekimi katıldı. Hekimlerin %87,8'i güneşten korunmaya çalıştığını belirtti. Kadınlar (%68,3) erkeklere (%41,4) göre daha fazla koruyucu losyon/krem kullandığını, hayatı boyunca 2 ve daha fazla şiddetli güneş yanığı geçirenler (%51,5), geçirmeyenlere göre (%36,2) istatistiksel anlamlı düzeyde kendilerini daha yüksek sıklıkta riskli bulduklarını ifade etti. Hekimlerin 47'si (%15,9) vücudunda 5 mm'den büyük, asimetrik şekilli, düzensiz yapılı ben olduğunu; 37'si (%12,5) şüpheli ben muayenesi, 11'i (%3,7) benlerinin incelenmesi için tüm vücut muayenesi amaçlı, 11'i (%3,7) güneşten korunmayla ilgili bilgi edinmek amacıyla, 20'si (%6,8) ise günlük deri bakımı ve deri yaşlanmasının engellenmesi hakkında öneri almak amacıyla dermatoloji uzmanına başvurduğunu söyledi. **Sonuç:** Güneşin zararlı etkileri ve cilt kanserinin erken tanısıyla ilgili aile hekimleri başta olmak üzere sağlık çalışanlarında ve toplumun diğer kesimlerinde farkındalık çalışmaları yapılmalıdır. Ayrıca cilt kanserinin tanısında görsel değerlendirmenin de yeri olduğu düşünüldüğünde aile hekimlerinin hastalarını güneşin zararlı etkileri ve kendi kendine deri muayenesi hakkında bilgilendirmesinin erken tanıda faydalı olacağı düşünülmektedir.

Anahtar kelimeler: Aile hekimleri, güneşten korunma, cilt kanseri

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INTRODUCTION

It is well known that sunlight affects the skin significantly and has harmful effects. It causes aging, sunburn, precancerous and cancerous lesions, and immunosuppression leading to skin cancer. The International Agency for Research on Cancer (IARC) classifies sunlight as a Group I carcinogen.[1-3] There is a substantial evidence that the three main types of skin cancer, basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and melanoma are associated with sunlight exposure. The incidence of skin cancer is higher in sun sensitive people with light-colored skin than people with naturally darker skin color. The risk increases with the increase of sunlight in the environment and it is more common in the parts of the body that are most exposed to the sun.[4-6] Both the decrease in the stratospheric ozone layer and the habits of people such as traveling to sunny regions and using solarium during holidays are factors that increase sun exposure. [7,8]

Melanoma is one of the most serious forms of skin cancer with an increasing incidence. Due to the increase in life expectancy in the general population, the increase in the incidence of melanoma affects especially the elderly population.[9] Every year, it is estimated that 160,000 new cases of melanoma are diagnosed around the World.[10] According to GLOBOCAN data for the year 2018, in Turkey, the incidence of melanoma is 1.7 per 100,000 people (1.9 in men and 1.6 for women) and the annual mortality rate is estimated as 0.6 per 100,000 people.[11] In a study conducted in 2015 by Abalı et al.[12], 1157 patients with cutaneous melanoma in Turkey were included and it was found that most of the patients were diagnosed at an advanced stage and therefore had a worse prognosis unlike the European countries and the United States [11]. Considering the fact that sunlight exposure is high in our country due to its geographical location and that working outdoors (agriculture / farming, etc.) is intense in rural areas, it can be said that the population carries a significant burden in terms of the melanoma risk. In combating skin cancers, especially melanoma, it is necessary to raise awareness about the disease in the society, to identify risky groups well, to define preventive measures and to introduce them to the public.[13]

Studies conducted in different parts of the society such as healthcare professionals and students in our country show that there is a lack of knowledge about the harmful effects of the sun and how people should be protected.[7,8,14] Therefore, the health authorities should develop sun awareness policies and carry out training activities and healthcare professionals should be careful about this issue regarding future generations.[14] In this context, it is important to determine the current status of physicians who play a major role in preventive medicine practices and work in primary health care services on the subject. In the current study, it is aimed to determine the knowledge level of family physicians working in Samsun city about skin cancers and their attitudes and behaviors about sun protection.

METHODS

Family physicians working in 408 family health centers in Samsun province constituted the population of the descriptive study. During the in-service trainings organized by Samsun Provincial Health Directorate in March 2019, family physicians were informed about the research and a questionnaire form created by the researchers was applied to those who volunteered to participate. With the permission of Uslu et al.[7], a questionnaire consisting of questions about the sociodemographic characteristics of family physicians and their attitudes and behaviors about sun protection was used. Ethical approval for the study was obtained from Ondokuz Mayıs University Clinical Research Ethics Committee (OMU-KAEK 2019/108).

SPSS 22.0 package program was used for the statistical analysis of all data. Data for continuous variables were expressed using the mean ± standard deviation and data for categorical variables using numbers (%). Chi-square test was used in the analysis of the data. Values of $p<0.05$ were considered statistically significant.

RESULTS

A total of 295 (72.3%) family physicians participated in the study voluntarily. Of the participants, 191 (64.7%) were male and 104 (35.3%) were female. The mean age of the physicians in the study group was 44.6 ± 7.3 years and their working time was 21.7 ± 7.5 years. Of the family physicians, 272 (92.2%) were general practitioners, 23 (7.8%) were family medicine specialists.

The skin colors of family physicians participating in the study were as follows; 15 (5.1%) pale white skin, 97 (32.9%) white skin, 127 (43.1%) light brown skin, 55 (18.6%) brown skin, 1 (0.3%) dark brown skin. In order to determine the skin response of family physicians to sun exposure, the reaction of their skins were questioned when they were exposed to sun for 30 minutes without protection at noon on the first sunny days of summer (Table 1).

Table 1: The skin response and sunburn status of family physicians to sun exposure			
Variables		**n**	**%**
Type of skin	Burns easily and severely, never tans	73	24.7
	Burns moderately, tans gradually	151	51.2
	Rarely burns, tans well	55	18.6
	Never burns, tans profusely	16	5.5
Frequency of "Mild or moderate" sunburn with 30 minutes of unprotected sun exposure	Never	37	12.5
	Once	49	16.6
	2-4 times	130	44.1
	5 times	27	9.2
	≥6	52	17.6
Frequency of "Severe" sunburn with 30 minutes of unprotected sun exposure	Never	137	46.4
	Once	92	31.2
	2-4 times	51	17.3
	5 times	3	1.0
	≥6	12	4.1

The vast majority (87.8%) of the family physicians expressed that they tried to protect from sunlight. For this purpose, 87.8% often / always tried to stay in the shade, 46.4% covered their body with long clothes, 43.4% used hats, 72.5% used sunglasses, 50.8% used sunscreen lotions / creams, and 80.7% did not go out at noon. When sun protection behaviors were compared according to gender, 14.7% of male physicians and 7.7% of female physicians stated that they did not take any protective measures ($p> 0.05$). It was found out that female physicians (68.3%) used sunscreen lotions / creams more frequently than male physicians (41.4%) ($p<0.05$) (Table 2). According to the comparison of the participants' self-risk assesment in terms of skin cancer, those who had 2 and more severe sunburns in their lifetime (51.5%) found themselves at higher risk than those who did not (36.2%) ($p<0.05$).

Table 2. Sun protection behavior and sunscreen use of family physicians, n (%)			
Sun protection behavior	**Male**	**Female**	**p***
Yes	163(85.3)	96(92.3)	0.119
No	28(14.7)	8(7.7)	
Sunscreen lotion/cream use			**p****
Yes	79(41.4)	71(68.3)	**<0.001**
No	112(58.6)	33(31.7)	

* $X^2=2.435$
** $X^2=18.445$

When the family physicians were asked about the meaning of numbers on the sunscreen lotions / creams; 26 of them (8.8%) did not know, 117 (39.7%) thought that they were the number of substances in sunscreen that protected from the sun, 81 (27.5%) expressed that they were related with the type of skin it was suitable for, 107 (36.3%) thought that they were related with the duration of sun protection. While choosing sunscreen lotions / creams, the factors that the physicians paid attention was the price in 59 (20%), the protection factor in 236 (80%), the brand in 160 (54.2%), the advice of the esthetician / beautician in 5 (1.7%), the pharmacist's suggestion in 13 (4.4%) and the dermatologist's suggestion in 94 (31.9%). The rate of participants who preferred sun protection products

(SPPs) with a sun protection factor (SPF) 50 was %52.9, SPF 30 was %36.0 and less than SPF 30 was %11.1. Of the family physicians who used SPPs, 116 (%39.3) stated that they would appyl the SPPs just before sunbathing on the beach,139 (%47.1) indoors just before going to the beach, 47 (%15.9) while training outdoors, 68 (%23.1) while going outside in summer, 32 (%10.8) all year around.

Twenty nine (9.8%) of the physicians participating in the study had skin cancer in their close relatives. The reasons of the physicians for application to dermatologists were: 47 (15.9%) had asymmetrically shaped, irregularly structured moles larger than 5 mm, 37 (12.5%) had suspected presence of moles, 11 (3.7%) wanted whole body examination for moles, 20 (6.8%) needed advice on daily skin care and prevention of skin aging. Only 23.4% of the physicians who had asymmetrically shaped and irregularly structured moles larger than 5 mm on their bodies stated that they visited a dermatology specialist for a suspicious mole examination. When family physicians were asked in which category they described themselves in terms of skin cancer risk; 178(60.3%) of them thought that they were at low risk, 101 (34.2%) at medium risk and 16 (5.4%) at high risk. About one-third of the of the physicians 108 (36.6%) reported that they heard about Ultra Violet Index (UVI) and 127 (43.1%) of them heard of Dermoscopy. The propositions marked as ‘‘Correct’’ among physicians were as follows: "The high number of melanocytic nevi is a risk factor for melanoma development." in 243 (82.4%), "Early childhood sunburns play a greater role in skin cancer development than adult sunburns." in 192 (65.1%), "Squamous cell carcinoma and basal cell carcinoma are seen most frequently on the face." in 187 (63.4%), "Exposure to the sun accelerates skin aging, wrinkles and spots." in 267 (90.5%). The propositions marked as ‘‘False’’ were as follows: "Melanoma de novo occurs, not over pre-existing melanocytic nevi." in 138 (46.8%), "Sunlight has an immunostimulating effect." in 35 (11.9%), "Light colored clothes have better sun protection than dark colored ones." in 33 (11.2%), "Tight-fitting clothes have better sun protection than loose ones." in 228 (77.2%), "Tanned skin is not affected by the harmful effects of sunlight." in 247 (83.7%).

The majority of the family physicians 278 (94.2%) thought that malignant melanoma was a preventable cancer, 272 (92.2%) thought that the screening program was effective in preventing this cancer, and 191 (64.7%) found this program as cost-effective. Almost two-third of the family physicians 198 (67.1%) stated that they examined their patients for their moles and referred to a dermatologist in suspicious cases (98.3%).

DISCUSSION

Studies have demonstrated that the sun protection attitudes of the physicians can be a determinant of their recommendations about sun protection to their patients. Even if information is available from different sources, physicians are an important resource in reaching accurate information on daily practice.[14,15] It is known that sun is the most significant environmental factor in regard to the development of premalign skin lesions and skin cancer. Therefore, it is important to avoid sunlight and use broad spectrum sunscreens.[16-18] In our study, 87.8% of the family physicians stated that they tried to protect from the sun using different methods and half of them used protective lotions / creams. Although the use of sun protective creams was found at different rates in studies conducted with adults, it was observed that the rates of women were higher than men similar to the present study.[14,19-21] This is likely related to the fact that women show greater concern towards the ageing of skin.

Simple measures that can be taken to protect from the harmful effects of the sun include spending time outdoors under an umbrella or in the shade, wearing clothes that cover arms and legs, wearing wide-brimmed hats, wearing wraparound sunglasses that block both UVA and UVB rays and staying indoors between 10:00-16:00 hours and using sunscreen with SPF 15 or higher regularly. Sunlight is a preventable risk factor for all types of skin cancer, and studies support that regular use of sunscreen can reduce the risk of invasive melanoma.[21-24] The numbers written on sunscreen products are called the SPF (Sun Protection Factor) value of the product and show its effectiveness in preventing erythema caused by sunlight.[25] Although 80% of family physicians stated that they paid attention to the protection factor when choosing sunscreen lotions/creams, only 36.3% of them knew that the numbers meant duration of protection from the sun. It has been found that severe sunburn increases the risk of malignant melanoma development.[26] Uslu et al.[7] found the rate of physicians having a severe sunburn once as 24.1% and the rate of those who described themselves at high risk for skin cancer as 11.2%, and in our study, these rates were 31.2% and 5.4%, respectively. This difference may be due to the fact that the province of Samsun is in the region of Blacksea and is not under the influence of sunlight as much as Aydın.

It has been shown in various studies that changes in the skin and skin cancers are associated with sunlight.[27-29] In relation to this, 90.5% of the family physicians gave correct answers about the effects of sun exposure, but just 65.1% of them were able to answer the proposition that sunburn was

associated with the development of skin cancer. In addition, the rate of correctly responding to the propositions that melanoma could develop over melanocytic nevi (46.8%), the effect of sunlight on the immune system (11.9%), and the sun protection feature of the clothes according to the colors (11.2%) was found to be low. In the study done by Uslu et al.[7], similarly, the rate of physicians who knew that the sun had an immunosuppressive effect, sunburns in childhood were important, and dark-colored clothes had more sun-protective effects than those with light colors were less. The rate of referral to a dermatologist with suspicious moles was also found to be very low. Although studies have been conducted in different regions and physician groups, similar results suggest that there is a lack of information about this subject at each step.

Although melanoma is less common than other skin cancers, it is responsible for approximately 75% of all skin cancer-related deaths.[30] In the United States, according to the data for 2012-2016, about 77.698 people are diagnosed with melanoma and nearly 9008 people die from this disease each year.[31] In our study, although almost all family physicians thought that malignant melanoma was a preventable cancer and the screening program was effective in preventing this cancer, only 67.1% of them stated that they examined their patients for their moles. In the study by Oğrum A. and Oktay G.[19], it was found that physicians recommended sunscreen to 65.9% of their patients. In fact, primary health care workers should be more effective in both prevention and early diagnosis of malignant melanoma and other skin cancers. It is very important in the diagnosis of skin cancers that family physicians, who play a major role in preventive medicine practices, should perform total body skin examination for their patients and refer to a dermatologist in suspicious cases. Visual evaluation is still very important in the diagnosis of skin cancer.[31] In studies conducted on patients diagnosed with melanoma, it was seen that they received services from primary care physicians at the time of the diagnosis.[32,33]

It is crucial to increase the awareness level of the society to reduce the incidence of skin cancer, especially melanoma, and to ensure early diagnosis. The World Health Organization (WHO) recommends avoiding the sun during the midday hours, staying in the shade, using sunscreen with at least SPF 15, using sun-protective hats, clothes, and sunglasses, avoiding solarium and tanning as sun protection behaviors.[28] Along with similar recommendations for skin cancer prevention, the National Comprehensive Cancer Network (NCCN) and the American Cancer Society also suggest regular skin self-examination.[34,35]

Our study has some limitations. First, all of the family physicians working in Samsun provinces could not be surveyed. Second, the answers of the physicians about the sun protection behaviors were given with a statement.

CONCLUSION

In the current study, it was observed that most of the family physicians tried to protect from the sun, female physicians used sunscreen lotions/creams more frequently than male physicians, but physicians lacked knowledge about the harmful effects of the sun.

Awareness studies should be carried out, especially in healthcare professionals, to protect from the harmful effects of the sun and it should be started with family physicians who are the first contact point of the society. In addition, providing information to all segments of the society, particularly in high risk groups, is essential in the fight against melanoma and other skin cancers. It is important to successfully implement primary and secondary prevention steps by informing family physicians, who play an effective role in preventive medicine, letting them explain the harmful effects of the sun and skin self-examination to their patients, and referring them to a dermatology specialist by diagnosing suspicious cases.

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