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ORIGINAL ARTICLE

Awareness of Relation Between Erectile Dysfunction and Cardiovascular Diseases Among the Urologist In Turkey

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Abstract

Introduction: Erectile dysfunction (ED) is considered as a risk factor for cardiovascular diseases (CVD), which stands among the most important causes of death worldwide. For this reason, the evaluation of ED with a multidisciplinary approach is crucial. This study aims to assess the awareness of urologists in Turkey about the relation between ED and CVD.

Methods: An online questionnaire consisting of 13 questions was sent by email to urology specialists and urology assistants registered to the Turkish Association of Urology (TAU) communication network. The questionnaire consisted of the first six questions including personal questions about working conditions and work experience, and the last seven questions about the awareness of the relation between ED and CVD.

Results: 154 people participated in the questionnaire sent to urologist via the communication network of the TAU. 59.8% of the participants stated that they always questioned the presence of CVD in patients presenting with ED complaints, and 11.7% always asked for a cardiology consultation. The rate of requesting a cardiology consultation in ED patients was similar ($p>0.05$) among the participants when grouped based on the professional title, their interest in andrology, institution they worked, and frequency of seeing ED patients. However, in the 40 years of age and under group the rate of requesting cardiology consultation was significantly higher compared to over 40 years of age group ($p=0.01$).

Discussion and Conclusion: It was found that age and professional experience were decisive in the overall approach and generally, the urologists had high level of awareness about the relation between ED and CVD.

Keywords: Andrology; cardiology; cardiovascular disease; erectile dysfunction; urologist.

Erectile dysfunction (ED) is defined as the persistent inability to attain or maintain an erection sufficient to permit a satisfactory sexual intercourse.[1] ED is a common problem worldwide affecting a large proportion of men in Turkey.[2] ED, with an increased incidence with age, is observed in one in every two men over the age of 40.[3] It is accepted as the early sign of cardiovascular diseases (CVD), which stands among the most important causes of death worldwide as well as the sexual problems it causes.[4,5] Both ED and CVD occur as a result of vascular endothelial dysfunction, in addition to the common risk factors such as aging, hypertension, diabetes mellitus, smoking, obesity, and dyslipidemia in the etiology of both diseases.[6-10]

Evaluation of the patients with CVD revealed the fact that they had ED for three to 5 years prior to CVD diagnosis and ED has been accepted as an independent risk factor for

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CVD.[11,12] In addition, it has been shown that phosphodiesterase 5 inhibitors (PDE 5 inh), which are in the first step in ED treatment, have recuperative effects on the myocardium and it has been thought that they may affect the prognosis of CVD positively.[13,14] For this reason, in every patient with ED complaint, it is very important to keep in mind that ED may be a precursor of CVD and to evaluate with a multidisciplinary approach.

In a recent study in China, the cognitive levels of urologists about the association of ED and CVD were evaluated and the importance of urologists questioning the CVD history in ED management was emphasized.[15] However, no study has been conducted on whether urologists in our country consider the CVD coexistence in ED management and their level of awareness on this issue. In this study, we aimed to reveal the level of awareness about CVD relation with ED of urologists in Turkey.

Materials and Methods

Turkish Association of Urology (TAU) communication network is a platform that %80 of urologist in Turkey registered. Besides announcing the activities of the association such as scientific meetings, courses, congresses, symposiums, and social events to its members, it has recently begun to be used as an online platform for comprehensive joint studies such as planning and conducting multi-center research by providing communication between urologists.

In our study, we sent an online questionnaire, consisting of 13 questions, to the urology specialists and urology assistants registered via the TAU communication network. The survey was conducted in Turkish. The first six questions consisted of personal questions containing information about working conditions and work experience, while the last seven consisted of questions about the awareness of the relationship between ED and CVD. There were no exclusion criteria for the participants.

Data analysis was done with IBM SPSS 25 program (IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp., Utah, USA). The frequency and percentage values of the variables are given. The relationship between variables was examined using the Chi-square test. $p<0.05$ was considered statistically significant.

Results

About 20% (154 people) of 770 urology specialists and urology assistants who were sent e-mails through the TAU's network participated in our survey. 48.1% of the participants (74 people) were 40 years old and younger, while 51.9% (80 people) were 41 years old and over. 28.9% of the participants (44 people) were urology residents, 33.8% (52 people) were urologists, 20.8% (32 people) were urology associate professors and 16.9% (26 people) were urology professors. About 76.6% of the participants (118 people) had their residency training in a training and research hospital, whereas 22.1% (34 people) had in a university hospital. Moreover, 59.7% (92 people) of participants were working in a training and research hospital, while 8.2% (28 people) in a university hospital. 36.4% of the participants (56 people) were in the first 5 years of their specialty (Table 1).

About 49.4% of the participants (76 people) stated that they were interested in andrology and 66.2% (102 people) had attended a meeting or congress on andrology at least once in the last 5 years. 28.6% of the participants (44 people) stated that they evaluated patients with ED complaints five or less per week, and 36.4% (56 people) evaluated 6–10 patients per week, 35.1% (54 people) encountered more than 10 patients with ED complaints per week (Table 2).

Table 1. General aspects of participants

	n	%
Age (Year)		
30 and under	46	29.9
31–40	28	18.2
41–50	38	24.7
51–60	29	18.8
61 and over	13	8.4
Professional Title		
Professor	26	16.9
Associate Professor	32	20.8
Urologist	52	33.8
Urology Resident	44	28.6
Institution of Expertise		
University Hospital	34	22.1
Training & Research H	118	76.6
Other	2	1.3
Current Institution		
University Hospital	28	18.2
Training & Research H	92	59.7
Public Hospital	12	7.8
Private Hospital	22	14.3
Duration of Specialty (Year)		
0–5	56	36.4
6–10	22	14.3
11–20	24	15.6
21 and over	52	33.8

H: Hospital.

Table 2. Participants' interest in andrology, the number of evaluated ED patients per week and attendance to andrology congress and meetings and participants' approach to ED-CVD relation and reasons of participants to request a cardiology consultation in ED patients

	n	%
Number of Evaluated ED Patients (x/week)		
0–5	44	28.6
6–10	56	36.4
11–20	30	19.5
21 and over	24	15.6
Interest in Andrology		
Yes	76	49.4
No	78	50.6
Attendance to Andrology Congress or Meeting in the Last 5 Years		
Never	52	33.8
Only one	40	26
More than one	62	40.2
Questioning the Association of ED and CVD in the Anamnesis		
Never	2	1.3
Sometimes	14	9.1
Often	56	29.9
Always	92	59.7
CVD Evaluation in ED Patient		
Yes	78	50.6
No	76	49.4
Requesting a Cardiology Consultation in an ED Patient		
Never	10	6.5
Sometimes	96	62.3
Often	30	19.5
Always	18	11.7
Reason for Cardiology Consultation in an ED Patient		
QUESTION 13.1 Before starting PDE5 inhibitor in patient who does not use any cardiovascular medication		
No	136	88.3
Yes	18	11.7
QUESTION 13.2 Before starting PDE5 inhibitor in patient using cardiovascular medication		
No	72	46.8
Yes	82	53.2
QUESTION 13.3 Patient with any cardiovascular event history		
No	98	63.6
Yes	56	36.4
QUESTION 13.4 Evaluation for association between ED and CVD		
No	106	68.8
Yes	48	3.2

ED: Erectile dysfunction; CVD: Cardiovascular disease; PDE-5: Phosphodiesterase -5.

There was no significant difference in the participants' interest in andrology, when evaluated based on age, institution of specialty training, and duration of specialty ($p>0.05$). However, urologists working in universities and training and research hospitals were significantly more interested in andrology than specialists working in other institutions ($p=0.004$). There was no significant difference in the rate of attendance to the andrology congress or symposium, which is independent of age, institution where specialist training was taken, institution where they worked, duration of specialty, and professional title ($p=0.69$; $p=0.21$; $p=0.98$; $p=0.97$; $p=0.75$). There was no significant relationship between the number of patients seen with ED complaints and interest in andrology ($p>0.05$) (Table 3).

About 59.8% of the participants (92 people) stated that they always questioned the presence of CVD in patients with ED complaints, 1.3% (2 people) never questioned them, while 11.7% (18 people) always wanted a cardiology consultation and 6.5% (10 people) never asked for a consultation (Table 2). The frequency of requesting a cardiology consultation in ED patients was similar among the participants when evaluated according to the title, their interest in andrology, the institution they worked for, and the frequency of seeing ED patients ($p>0.05$). However, the frequency of requesting cardiology consultation in patients with ED was significantly higher in urologists aged 40 years and younger compared to urologists over 40 years of age ($p=0.013$). In addition, the question on the frequency of requesting a cardiology consultation was answered as "always" in higher numbers by the urologists with 10 years or less specialization when compared to those with more than 10 years of expertise, which was statistically significant. Furthermore, as the age increased, urologists chose the "sometimes" option significantly more ($p=0.02$; $p=0.01$) (Table 3).

In the last question, we asked participants to reason their cardiology consultation, allowing them to choose more than one option; 40% stated that they were asking consultation to evaluate the association between ED and CVD, 46.7% were asking for the patients who had any cardiovascular event history. When initiating PDE5 inhibitor 15% of the participants were asking consultation for patients who did not use any cardiovascular medication, and 68.3% were asking for consultation for patients who were already using cardiovascular medications (Table 2). The frequency of requesting a cardiology consultation in patients to whom PDE5 inhibitor was to be started was significantly higher in specialists who received their specialty training from university hospitals, but when evaluated in terms of the institutions they served, there was no significant difference ($p=0.04$; $p>0.05$) (Table 3).

Table 3. Classification of the participants according to age, professional title, institution of expertise, current institution, duration of specialty, and the number of ED patients evaluated per week

	Interest in Andrology	Attendance to Andrology Congress	Questioning the Association of ED and CVD in the Anamnesis	CVD Evaluation in ED Patient	Requesting a Cardiology Consultation in an ED Patient	Q 13.1	Q 13.2	Q 13.3	Q 13.4
Age (Year)									
≤40	0.21	0.69	0.76	0.13	0.01	0.73	0.29	0.15	0.81
>40									
Professional Title									
Professor	0.04	0.75	0.84	0.36	0.07	0.65	0.70	0.55	0.46
Associate Professor									
Urologist									
Urology									
Resident									
Institution of Expertise									
U Hospital	1	0.21	0.76	0.34	0.71	0.04	0.99	0.53	0.84
T & R Hospital									
Other									
Current Institution									
U Hospital	0.004	0.89	0.11	0.43	0.92	0.88	0.41	0.06	0.80
T & R Hospital									
P Hospital									
Pr Hospital									
Duration of Specialty (Year)									
≤10	0.45	0.97	0.35	0.07	0.02	0.73	0.63	0.17	0.63
>10									
Number of Evaluated ED Patients (x/week)									
≤5	0.74	0.09	0.40	0.12	0.40	0.76	0.25	0.29	0.82
6–10									
11–20									
>20									

U: University; T & R: Training and Research; P: Public; Pr: Private.

Discussion

ED and CVD are directly related to each other. For this reason, it is very important for urologists to know that besides sexual problems caused by ED, it is a risk factor for CVD, which is among the most important causes of death worldwide, and the necessity of a multidisciplinary approach in disease management.[16] There are many studies evaluating the relation between ED and CVD, but the literature on the cognitive awareness of urologists about the association between ED and CVD is quite limited.[17] After emphasizing that urologists have a very important role in the management of ED in patients with CVD history, a limited study has been conducted on the awareness of urologists in China about the association of ED with CVD.[15,16] Our study is the first study on the awareness on CVD relation with ED of urology specialists in Turkey.

We questioned the interest in andrology considering that it may make a difference among urologists in terms of awareness of the association between ED and CVD. We have seen that interest in andrology is more common among urologists working in educational research hospitals and university hospitals, yet the interest in andrology does not differ in the awareness of the relation between ED and CVD. In a study conducted among urologists in China, it was revealed that the awareness of the relations between ED and CVD was not related to the institution of study.[15] Our study results are also compatible with this study.

Participation in andrology meetings or congresses is very

important for urology specialists in terms of learning new knowledge and raising awareness about updates in practice. In our study, the rate of attending at least one andrology meeting or congress in the last 5 years did not differ between the groups, but the rate of those who did not attend any meetings in the last 5 years was quite high. However, we have observed that attending at least one meeting or congress on andrology in the last 5 years did not make a difference at the level of awareness of the relation between ED and CVD. This situation is important to show the need for innovations that will increase the number of participants and trigger the interest of the urologists in the planning of andrology meetings.

Professional experience is very effective in determining the approach to patients. In our study, although there was no difference in the rates of questioning the presence of CVD in the anamnesis in patients presenting with ED complaints among age groups, we found that the frequency of requesting a cardiology consultation in these patients was higher in urologists aged 40 and under. Contrary to the results of our study, a study conducted among urologists in China showed that more experienced urologists wanted a more detailed assessment of the CVD risk in patients with ED complaints.[15] This situation may be related to the young urologists in our country reacting more defensively against medicolegal problems that are becoming more common currently, apart from professional experience. Likewise, it can be attributed to similar factors that the number of ED patients observed does not make a difference in the level of awareness of the relation between ED and CVD.

It should be kept in mind that every patient presenting with the complaint of ED may have accompanying CVD, but it is not necessary for all patients to be consulted with cardiology. It is a more accurate approach to evaluate patients by risk classification according to the Princeton consensus accepted in 2012.[18] In our study, when the reasons for requesting a cardiology consultation were evaluated, we observed that the urologists in our country classified the patients, acted carefully in determining the presence of accompanying CVD, and determining the CVD risk before treatment. Moreover, their awareness about the relation between ED and CVD was high.

One of the limitations of our study is that the urology specialists who received the study questionnaire made a limited number of feedback and the number of questions was limited in order not to cause a decrease in the participant rate. However, this study is important in terms of emphasizing the importance of continuity of education, professional competence, and multidisciplinary approach, as well as including the infrastructure of professional organizations in the process.

Conclusion

The evaluation of ED patients was observed that the frequency of requesting a cardiology consultation by young urologists was higher, the frequency of requesting a cardiology consultation decreased as the age increased, the interest in andrology and the number of ED patients observed did not make a significant difference in the awareness of the relation between ED and CVD. Age and professional experience were decisive in the overall approach and it was seen that the awareness of CVD relation between ED was generally high among the urologists in Turkey.

Main Points

- ED is considered as a risk factor for CVD, which stands among the most important causes of death worldwide
- It should be kept in mind that every patient presenting with the complaint of ED may have accompanying CVD, but it is not necessary for all patients to be consulted with cardiology
- In general, the urologists in Turkey had high level of awareness about the relation between ED and CVD
- Age and professional experience were decisive in the overall approach.

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