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Original Research

Urologist communication is a primary factor leading to erectile dysfunction treatment postprostatectomy

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Abstract

Background: Studies have shown insufficient utilization of care for patients with erectile dysfunction (ED) after radical prostatectomy (RP).
Aim: The aim of this study was to evaluate variables associated with barriers to seeking and receiving ED treatment.
Methods: In this multicenter prospective cross-sectional study, the functional outcomes of 936 patients were assessed 10 to 15 years after RP. A total of 525 patients with ED or incontinence were asked about their treatment experiences or lack thereof. The data were analyzed using the chi-square test, *t* test, and multivariate logistic analyses.
Outcomes: Patients answered validated questionnaires regarding information sources, communication with their partner and urologist, and barriers to ED treatment.
Results: Of the 525 patients, 80 were not available to survey. A total of 304 patients answered the survey (response: 68.0%). A total of 246 patients had ED and were included in this study. The mean age at surgery was 64.4 ± 6.1 years, and the mean age at the time of this survey was 77.1 ± 6.2 years. The mean follow-up duration was 12.7 ± 1.5 years. Forty-six percent (n = 114 of 246) of the patients had never received ED treatment. The most important conversation partners regarding the ED were the partner (69% [n = 169 of 246]) and the urologist (48% [n = 118 of 246]). Patients who never received ED treatment were less likely to have conversations with their urologist (34% vs 60%; $P < .001$), had less support (51% vs 68%; $P = .01$), and had less interest in sex from their partner (20% vs 40%; $P = .001$). Communication with other groups (general practitioners, other physicians, family, friends, and the Internet) had no influence on ED treatment utilization. The most relevant barrier to receiving ED treatment was the belief that treatment would not help (65%). No interest in sex from their partner (odds ratio, 3.9) and no conversation with their urologist about ED (odds ratio, 2.9) were found to be independent predictors of not receiving ED treatment.
Clinical Implications: Urologists should have enhanced awareness of how to approach patients directly about their ED and actively offer them treatment options.
Strengths and Limitations: These results should be further validated in a multicenter, prospective study. Response bias may have affected the results. Furthermore, the current cohort was relatively old.
Conclusion: This study revealed that no interest in sex from one's partner and insufficient communication with a urologist were relevant barriers to insufficient utilization of ED treatment after RP.

Keywords: erectile dysfunction; health services research; prostatectomy; partnership; communication.

Introduction

Erectile dysfunction (ED) is the most common side effect that occurs after radical prostatectomy (RP). The prevalence rates of ED range from 10% to 87%.[1-3] The use of selected collectives with younger and more potent patients, overoptimistic reporting by patients themselves, and inconsistent definitions of ED might contribute to this wide range in prevalence rates. ED after RP is associated with poor quality of life.[4] The image of masculinity is impaired in affected individuals, and large population studies have confirmed that ED has an effect on the development of depression.[5-7]

Nevertheless, there are sufficient options for the treatment of ED after RP. Oral PDE5 inhibitors represent the lowest barrier to attempted treatment. Intraurethral and penile injections are additional drug-based options. Vacuum erection devices are a physical possibility.[8] Penile prostheses are a definitive surgical treatment option and show high levels of patient satisfaction in a selected population.[9] Despite the range of therapies available for ED, there is evidence of undertreatment. In a survey of prostate cancer patients, 31% of patients with ED after RP stated that they had never received treatment for their ED; furthermore, in the subgroup of sexually interested patients, this rate was 24%.[10] According to a registry study of 15 811 ED patients in the SEER (Surveillance, Epidemiology, and End Results) database, 2.3% of these patients underwent implantation of a penile prosthesis after RP. Due to the relevant ED rate after RP, undertreatment was also suspected in this database.[11]

Several studies have reported that there are communication problems between urologists and patients regarding ED. A German study showed that urologists overestimated the erectile function of their ED patients and underestimated their desire for treatment.[12] There are clear differences, especially concerning the impact of ED on patients' quality of life.

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According to the CaPSURE (Cancer of the Prostate Strategic Urologic Research Endeavor) study, which involved 2252 patients with prostate cancer, 97% of the patients reported a poorer quality of life due to their ED. This was only assessed by doctors in 52.4% of patients.[13] Furthermore, our prospective study group revealed insufficient utilization of care for the treatment of postprostatectomy ED. Among all ED patients who were interested in sex, 49% (n = 243 of 499) had never tried ED treatment. Nevertheless, 30% (n = 73 of 240) of these patients had moderate-to-severe issues, with their ED leading to worse mental health and quality of life.[14] These findings indicate insufficient utilization of care in Germany, but the reason remains unclear.

The aim of our study was to evaluate patients' reasons for not receiving ED treatment.

Methods

The HAROW (Hormone Therapy, Active Surveillance, Radiation, Operation, or Watchful Waiting) study, which was a prospective, observational, noninterventional health services study, evaluated the treatment of patients with histologically confirmed localized prostate cancer (T1a-T2c/N0/M0) in Germany from 2008 to 2013.[15] A total of 1260 patients underwent RP at 114 different institutions representing one-fourth of all German RP providers. We assessed the functional outcome after RP in these patients in 2017 (n = 936).[16] We contacted 525 patients who had urinary incontinence and/or an ED with interest in sex.[14] Interest in sex was assessed using an item on the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-PR25) with the answer "quite a bit" or "very much." For this study, we only analyzed patients with ED. The patients were contacted by mail in 2023. Nonresponders were contacted 2 more times.

Patients with ED were asked about communication with their partner and their urologist regarding ED, including general communication and detailed communication. We asked for information sources regarding ED treatment and usage of treatments with a validated item on the use of ED aids.[13] We further evaluated the barriers to taking advantage of ED therapy. Sexual function was assessed according to International Consortium of Outcome Measurements standards with 1 question from the Expanded prostate cancer index composite - 26 (EPIC-26) and EORTC QLQ-PR25 questionnaires.[17,18] The questions included, "To what extent were you interested in sex?" (EORTC QLQ-PR25) and "How would you describe the usual quality of your erections during the last 4 weeks?" (EPIC-26). The use of ED treatment was analyzed with the validated item on the use of ED aids.[10]

Quantitative variables are expressed as mean ± SD or as median and range. We used the chi-square test, *t* test, and multivariate logistic analyses for data analysis. Multivariate logistic regression analysis was performed with a binary outcome and 95% confidence intervals. The confounders included age, interest in sex and communication with one's partner and communication with a urologist. The median age was used as the cutoff variable for the multivariate analysis. $P < .05$ was considered to indicate statistical significance. All calculations were performed with IBM SPSS Statistics 29.

Ethics committee approval was obtained for the HAROW study and for the long-term follow-up. All patients provided written informed consent.

Results

Patient characteristics

A total of 525 patients with ED or incontinence were asked about their treatment. Eighty patients were lost to follow-up (8 patients died and 72 patients moved to an unknown address). The response rate was 68.0% (n = 304 of 445). A total of 246 patients had an ED and were included in this study. Fifty-eight patients were incontinent and were not included in this analysis. The mean age at surgery was 64.4 ± 6.1 years, and the mean age at the time of this survey was 77.1 ± 6.2 years. The mean follow-up time was 12.7 ± 1.5 years (median 13 [range, 10-15] years). A total of 77% (n = 150 of 194) of the patients underwent nerve-sparing RP. Forty-nine percent (n = 121 of 246) of patients did not achieve any erection, 23% (n = 57 of 246) achieved an erection that was not sufficient for any kind of sexual activity, and 28% (n = 68 of 246) achieved an erection sufficient for masturbation (Table 1).

Forty-six percent (n = 114 of 246) had never tried any kind of treatment for ED. These patients were older (78.8 ± 5.7 years vs 75.5 ± 6.3 years; $P < .001$), underwent nerve-sparing procedures less often (67% vs 86%; $P = .001$), and were less interested in sex (47% vs 65%; $P < .001$) (Table 1).

Communication about the ED and seeking information on treatment

There were differences between patients who tried treatment and those who never tried treatment in terms of addressing ED in a relationship. Patients who never tried treatment were more likely to state that their partner had little to no interest in sex (80% vs 60%; $P = .001$), spoke less often with their partner about the ED (5% vs 25%; $P = .003$), and received less support from their partner for dealing with the ED (49% vs 32%; $P = .01$) (Table 2).

The most important communication partners for the topic of ED were the partner (69%) and the urologist (48%) (Figure 1). Patients who never tried ED treatment talked less often with their urologist about this topic (34% vs 60%; $P < .001$), and accordingly, they were more likely to indicate that they did not want to talk about the ED with their urologist (47% vs 22%; $P < .001$) (Table 3).

The 3 most relevant information sources for the topic of ED treatment were the urologist (72%), the partner (52%), and the rehabilitation clinic (48%) (Figure 2).

Predictors for never receiving ED treatment

The following independent predictors for never receiving ED treatment were included: age of patient, interest in sex from the patient and partner, and conversation about the ED with the partner and urologist. Multivariate analysis revealed that little to no interest in sex from one's partner (odds ratio, 3.9; 95% confidence interval, 1.1-7.6; $P = .03$) and no conversation with a urologist about the ED (odds ratio, 2.9; 95% confidence interval, 1.2-6.5; $P = .01$) were independent predictors of not receiving ED treatment (Table 4).

Barriers to using ED treatment

The most common reason for not seeking ED treatment is that patients have come to terms with their ED (83%). Other common reasons are the belief that treatment would not help anyway (65%) and that sexuality was no longer important (59%) (Figure 3).

Table 1. Patient characteristics (N = 246).

Variable	All (N = 246)	Never received ED treatment (n = 114)	Received at least 1 ED treatment (n = 132)	*P* value
Age at RP (n = 229), y	64.4 ± 6.1, 65 (47-84)	66.1 ± 5.3, 67 (51-76)	62.9 ± 6.4, 63 (47-84)	<.001[a]
Age at survey (n = 229), y	77.1 ± 6.2, 78 (61-95)	78.8 ± 5.7, 79 (62-91)	75.5 ± 6.3, 76 (61-95)	<.001[a]
RP				
Open	147 (60)	68 (60)	79 (60)	1.0
Robotic	99 (40)	46 (40)	53 (40)	
Nerve sparing (n = 194)				
Yes	150 (77)	61 (67)	89 (86)	.001[a]
No	44 (33)	30 (33)	14 (14)	
Family status (n = 238)				
Single	23 (10)	9 (8)	14 (11)	.5
Partnership	215 (90)	100 (92)	115 (89)	
School degree (n = 226)				
Middle school degree or less	136 (60)	68 (65)	68 (58)	.1
High school degree	90 (40)	36 (35)	54 (42)	
Monthly income (n = 220)				
<1500€	28 (13)	12 (12)	16 (13)	.2
1500-4000€	159 (72)	66 (68)	93 (76)	
>4000€	33 (15)	19 (20)	14 (11)	
Erectile function				
None at all	121 (49)	64 (56)	57 (43)	.07
Not enough for any sexual intercourse	57 (23)	26 (23)	31 (24)	
Enough for masturbation	68 (28)	24 (21)	44 (33)	
Enough for intercourse	0 (0)	0 (0)	0 (0)	
Interest in sex (n = 239)				
None	57 (23)	39 (36)	18 (14)	<.001[a]
Few	7 (3)	32 (29)	43 (33)	
Moderate	68 (28)	27 (24)	41 (32)	
Much	39 (16)	12 (11)	27 (21)	

Values are mean ± SD, median (range), or n (%). Abbreviations: ED, erectile dysfunction; RP, radical prostatectomy. [a]statistically significant.

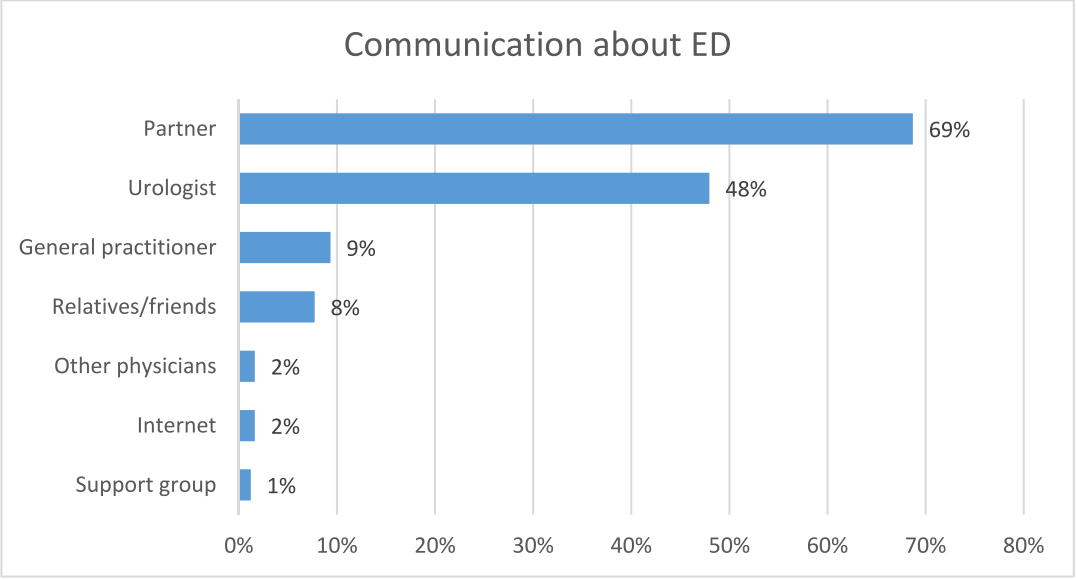

Figure 1. Who do patients talk to about their erectile dysfunction (n = 199)?

Discussion

In this study, 46% of patients with ED after RP never received treatment. The most important conversation partners for ED patients were the partner (69%) and the urologist (48%). Patients who never received ED treatment were less likely to have conversations with urologists (34% vs 60%; $P < .001$), had less support (51% vs 68%; $P = .01$), and had less interest in sex from their partner (20% vs 40%; $P = .001$). No interest in sex from their partner (odds ratio, 3.9) and no conversation with their urologist about the ED (odds ratio, 2.9) were found to be independent predictors of not receiving ED treatment.

Table 2. ED and partnership.

Variable	All (N = 246)	Never received ED treatment (n = 114)	Received at least 1 ED treatment (n = 132)	*P* value
Partner with physical closeness (n = 235)				
Yes	175 (74)	80 (73)	95 (76)	.6
No	60 (26)	30 (27)	30 (24)	
Interest in sex from the partner (n = 174)				
None	73 (42)	47 (57)	26 (28)	**.001**[a]
Few	48 (28)	19 (23)	29 (32)	
Moderate	46 (26)	14 (17)	32 (35)	
Much	7 (4)	2 (3)	5 (5)	
Conversation with partner about ED (n = 177)				
Yes, both of us	81 (46)	40 (49)	41 (43)	**.003**[a]
Yes, I speak about it	28 (16)	4 (5)	24 (25)	
Yes, my partner speaks about it	4 (2)	2 (2)	2 (2)	
No	64 (36)	35 (44)	29 (30)	
Embarrassment to talk to partner about ED (n = 184)				
Strongly agree	7 (4)	3 (4)	4 (4)	1.0
Agree	7 (4)	3 (4)	4 (4)	
Undecided	16 (9)	7 (8)	9 (9)	
Disagree	34 (18)	14 (16)	20 (20)	
Strongly disagree	120 (65)	58 (68)	62 (63)	
Partner has understanding for ED (n = 183)				
Strongly agree	126 (69)	61 (72)	65 (66)	.3
Agree	28 (15)	9 (11)	19 (20)	
Undecided	8 (4)	3 (3)	5 (5)	
Disagree	5 (3)	2 (2)	3 (3)	
Strongly disagree	16 (9)	10 (12)	6 (6)	
Partner supports dealing with ED (n = 175)				
Strongly agree	84 (48)	37 (47)	47 (49)	**.01**[a]
Agree	21 (12)	3 (4)	18 (19)	
Undecided	13 (7)	7 (9)	6 (6)	
Disagree	22 (13)	9 (12)	13 (13)	
Strongly disagree	35 (20)	22 (28)	13 (13)	

Values are n (%). Abbreviation: ED, erectile dysfunction. [a]statistically significant.

This study emphasizes the importance of relationships with 2 people who are important in the treatment of ED: the partner and the urologist. Patients who never received ED treatment had less support from their partner and reported a lower interest in sex from their partners. Several studies have shown the importance of the spouses of prostate cancer patients in coping with their diagnosis and its consequences.[19-22] Our study shows that for a very large proportion of those affected (69%), their partner is a relevant source of communication on the subject of the ED. Nevertheless, partners consider ED in the context of several aspects of their relationship.[23] Skills such as open and constructive communication between couples are essential for successful coping with ED.[21,24] In our study on a positive note, 46% of patients said that both sides talked about it. Those patients who received at least 1 ED treatment were more likely to have talked about the ED of their own volition (25% vs 5%). A previous cross-sectional study showed the benefit of psychosocial interventions to facilitate healthy spousal communication and address sexual problems.[25] Couple therapy interventions can be helpful for partners and patients to cope with ED.[26] Even if patients without ED treatment in our study stated that their partner had less interest in sex (none/few: 80% vs 60%), there was still no difference in the aspect of physical closeness between the 2 groups. A low level of embarrassment about talking about the ED (83%) and a high understanding of the ED of the partner (84%) are likely to have positive implications for the constructive handling of the ED. Nevertheless, patients receiving ED treatment more frequently reported being supported by their partner in dealing with the ED (68% vs 51%). This may underscore the need for interventions to help couples cope with the ED.

This raises the question of which people can provide this support. First and foremost, the treating urologist can initiate ED treatment and either provide methods for addressing ED in a constructive way or refer the patient to receive further psychosocial support. However, based on our data, the overriding problem seems to be the lack of information about treatment for ED. This is consistent with our results, which revealed that not having a conversation with a urologist was an independent predictor of never receiving ED treatment (odds ratio, 2.9). Patients who never received ED treatment were more likely to have not received information about ED treatment (47% vs 12%). A German study on the perception of the need for ED treatment showed a relevant underestimation of patients' desire for treatment by doctors. Of the 642 patients, 59.6% reported that they wanted treatment, and 28.2% explicitly stated no desire for treatment. The attending urologists estimated that 46.1% of patients had a desire for treatment and 44.8% of their patients had no desire for treatment.[12] Additionally, in the follow-up of the CaPSURE study of 2252 patients after prostate cancer therapy, 97% reported a poorer quality of life due to their ED. This was only assessed by doctors in 52.4% of the patients.[13] Thus, on the one hand, the problem lies with the urologist, who is less able to recognize the patient's experience. On the other

Table 3. Sources of information regarding the ED and its therapy.

Variable	All (N = 246)	Never received ED treatment (n = 114)	Received at least 1 ED treatment (n = 132)	*P* value
Conversation about ED with partner				
Yes	169 (69)	74 (65)	95 (72)	.3
No	77 (31)	40 (35)	37 (28)	
Conversation about ED with friends/relatives				
Yes	19 (8)	10 (10)	9 (7)	.6
No	227 (92)	104 (90)	123 (93)	
Conversation about ED with urologist				
Yes	118 (48)	39 (34)	79 (60)	<.001[a]
No	128 (52)	75 (66)	53 (40)	
Conversation about ED with general practitioner				
Yes	23 (9)	9 (8)	14 (11)	.5
No	223 (91)	105 (92)	118 (89)	
Conversation about ED with other physicians				
Yes	4 (2)	2 (2)	2 (2)	.9
No	242 (98)	112 (98)	130 (98)	
Conversation about ED with support group				
Yes	3 (1)	3 (3)	0 (0)	.06
No	243 (99)	111 (97)	132 (100)	
Conversation about ED in Internet				
Yes	4 (2)	1 (1)	3 (2)	.4
No	242 (98)	113 (99)	129 (98)	
Conversation about ED with urologist in follow-up care (n = 232)				
Yes, regularly	41 (18)	14 (13)	27 (22)	<.001[a]
Yes, irregularly	41 (18)	15 (14)	26 (21)	
Yes, I address it myself	50 (21)	16 (15)	34 (27)	
No, but I would like it	23 (10)	12 (11)	11 (8)	
No, I do not want to talk about it	77 (33)	50 (47)	27 (22)	

Values are n (%). Abbreviation: ED, erectile dysfunction. [a]statistically significant.

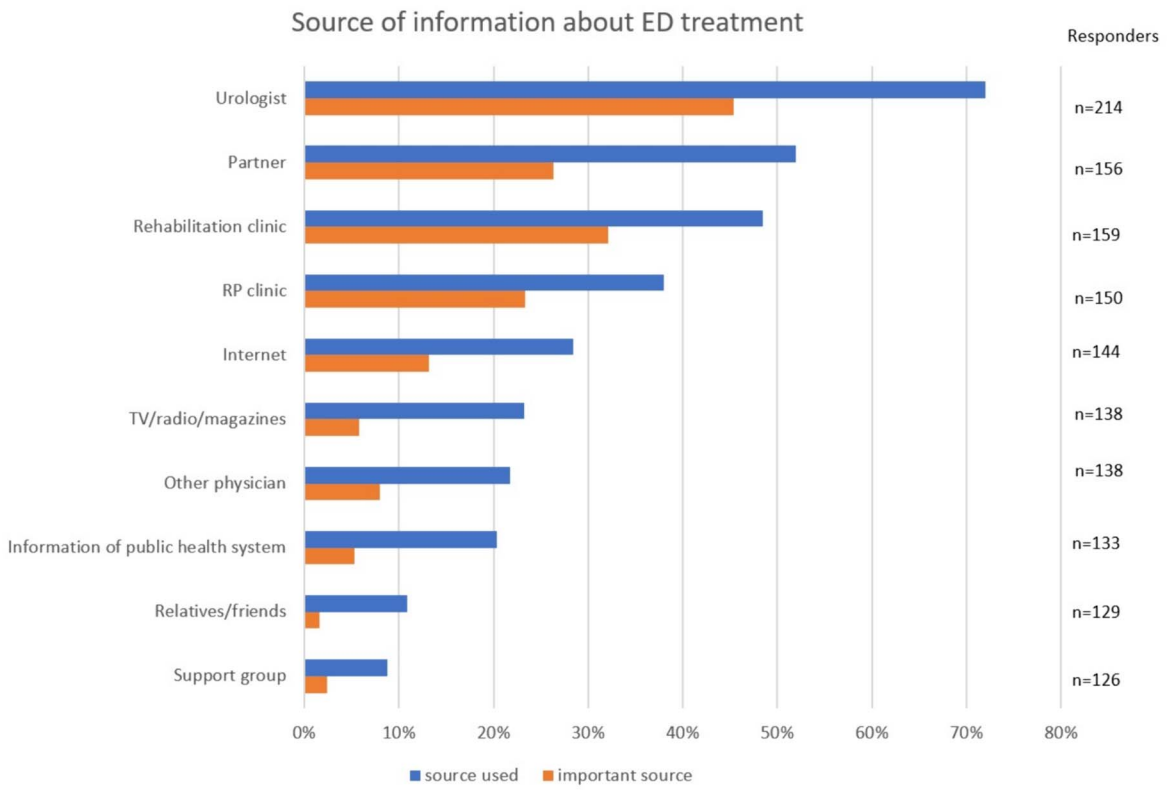

Figure 2. Source of information about erectile dysfunction treatment and its importance (dark upper bar: source used; light lower bar: source rated as important for patient).

Table 4. Univariate and multivariate analyses for independent predictors of patients who never received treatment at their ED.

Variable	Univariate		Multivariate	
	OR (95% CI)	*P* value	OR (95% CI)	*P* value
Higher age at RP (≥66 y)	2.2 (1.3-3.7)	**.004**[a]	1.2 (0.3-4.9)	.8
Higher age at survey (≥79 y)	2.2 (1.3-3.7)	**.004**[a]	1.7 (0.4-7.0)	.4
Few to no interest in sex from the patient	2.0 (1.2-3.4)	**.008**[a]	1.6 (0.7-3.6)	.3
Few to no interest in sex from the partner	2.8 (1.4-5.5)	**.004**[a]	3.9 (1.1-7.6)	**.03**[a]
No conversation about ED with urologist	3.2 (1.8-5.4)	**<.001**[a]	2.9 (1.3-6.5)	**.01**[a]
No conversation about ED with partner	1.8 (0.9-3.3)	.07	1.7 (0.7-4.0)	.2

Abbreviations: CI, confidence interval; ED, erectile dysfunction; OR, odds ratio; RP, radical prostatectomy. [a]statistically significant.

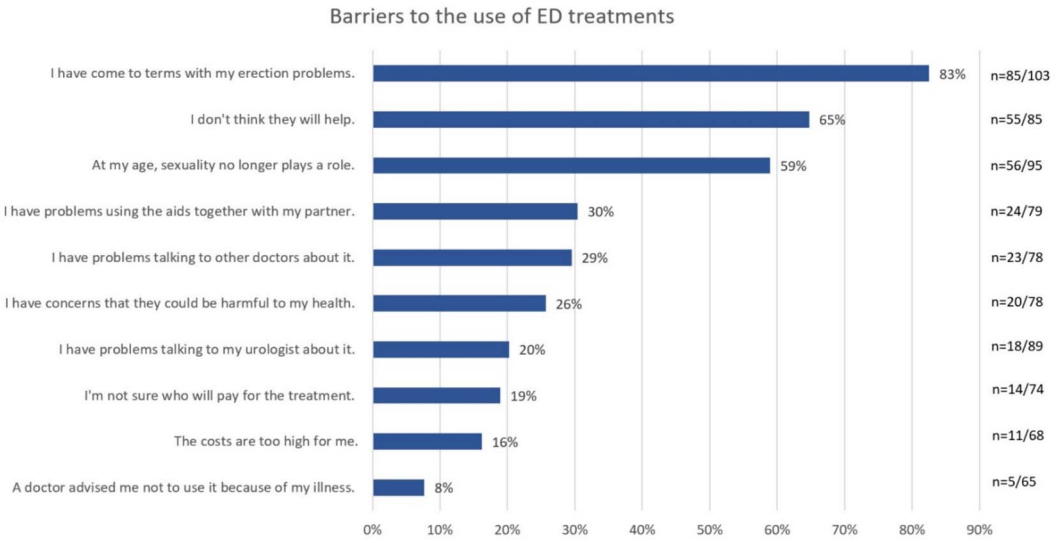

Figure 3. Barriers to the use of erectile dysfunction treatments for patients who never received erectile dysfunction treatment (n = 114).

hand, patients communicate less actively. This is supported in our cohort, where patients without ED treatment were more likely to state that they did not want to talk about the ED with their urologist (47% vs 22%; $P < .001$). Nevertheless, the ED is part of the urological specialty, and urologists should be able to address the associated embarrassment and provide more sensitive communication with those affected. On the other hand, our data also show that other groups (the Internet and other physician groups) have no influence on the treatment of ED. This, in turn, underlines the importance of the urologist.

Although it is an embarrassing topic, most patients mention the urologist (72%), their partner (52%), and the rehabilitation clinic (48%) as sources of information about ED treatment. Nevertheless, the significance of the information was not always considered important (26%-45%) (Figure 2). Only 28% of the respondents searched for information on the Internet. Its importance was also significantly lower (13%). This is interesting information because the Internet can be a good source of information on an embarrassing topic due to its anonymity, and older age is no longer an obstacle to using the Internet.[27,28]

To analyze barriers to seeking information about ED treatment, an international survey of 32 644 men examined health behaviors related to ED. The study showed that older age, embarrassment, and lower levels of interest in sexual intercourse were barriers to seeking information about ED treatment. Older men view ED as a normal part of the aging process.[29] Nevertheless, prostate cancer patients are in close contact with urologists due to their cancer. In our study, those who never received ED treatment stated that they had come to terms with their ED (83%) and that sexuality no longer played a role (59%) (Figure 3). These answers may be biased by the long follow-up period and older age of the participants during this survey (78.8 ± 5.7 years). It remains somewhat unclear whether the barrier of "I have come to terms with my erection problems" may be the initial reason not to try an ED treatment or whether it is a reaction of one of the other more specific barriers. However, the second most common answer was the belief that ED treatment would not help anyway (65%). This seems to be an obstacle that is easy to overcome by providing adequate information and trying out a treatment. The findings emphasize the importance of the urologist in actively addressing this issue and providing adequate advice on treatment options.

There are limitations to our study. The response rate was 58.0%, so there may have been nonresponder bias. Due to the embarrassment of the topic, the problem may be more prevalent among nonresponders. Furthermore, the long follow-up time possibly influenced personal attitudes toward the ED. The respondents in this study were already older; therefore, interest in sexual activities may be lower than that in a younger group. They may also have less hope for the return of erections or sexuality. This is reflected by the frequently reports of individuals who have come to terms with their erection problems and those who indicated that sexuality is no longer important. Nevertheless, it does not affect the aspect of never receiving ED treatment. In contrast, our study covered

a long period of time during which patients would have had the opportunity to take advantage of ED treatment. This is the first study investigating the reasons for not receiving ED treatment after RP. Our study population underwent RP at 114 different institutions, accounting for one-fourth of all German providers of RP. Therefore, the bias of individual practice patterns possibly influencing the treatment of ED is very low.

Conclusion

Our study revealed that in addition to a lack of interest in sex from one's partner, insufficient communication with one's urologist is a relevant barrier to seeking ED treatment. To improve the situation, urologists should be aware of how to address this problem directly with patients and actively offer treatment options, precisely because they are the most important contact for ED patients. Further studies should investigate ways in which urologists can provide patient support with respect to partnerships.

Author contributions

M.B. (Conceptualization-Lead, Data curation-Supporting, Formal analysis-Lead, Funding acquisition-Equal, Investigation-Lead, Methodology-Lead, Project administration-Lead, Validation-Equal, Writing – original draft-Lead, Writing – review & editing-Equal), C.G. (Methodology-Supporting, Writing – review & editing-Equal), A.B. (Writing – review & editing-Equal), F.H. (Methodology-Supporting, Writing – review & editing-Equal), F.C. (Data curation-Supporting, Writing – review & editing-Supporting), L.W. (Data curation-Lead, Writing – review & editing-Supporting), C.T. (Funding acquisition-Supporting, Project administration-Supporting, Writing – review & editing-Supporting), J.H. (Conceptualization-Equal, Data curation-Supporting, Funding acquisition-Lead, Methodology-Equal, Project administration-Equal, Supervision-Equal, Writing – original draft-Equal, Writing – review & editing-Equal).

Supplementary material

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Conflicts of interest

All authors state that no aspect of their current personal or professional circumstances places them in the position of having a conflict of interest with this study.

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