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Review

Urological risk factors for premature ejaculation

Prematür ejakülasyon için ürolojik risk faktörleri

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ABSTRACT

Premature ejaculation (PE) is considered the most common form of male sexual dysfunction, and the prevalence of PE complaints range from 20% to 40% among sexually active men. Acquired PE, which occurs due to an underlying organic and/or psychological cause, may be a treatable condition. Recent evidence has suggested that certain medical conditions such as hyperthyroidism may cause PE. In addition to hyperthyroidism, the literature has also revealed several urologic risk factors that may predispose a man to acquired PE; these include erectile dysfunction, prostatic diseases and chronic pelvic pain syndrome, varicocele, monosymptomatic enuresis and circumcision. This review aims to provide a systematic analysis of the literature regarding these urological risk factors of acquired PE.

Key words: Circumcision; erectile dysfunction; monosymptomatic enuresis; premature ejaculation; prostatic disease; varicocele.

ÖZET

Prematür ejakülasyon (PE) erkek cinsel bozuklarının en sık görülen türüdür ve cinsel aktif olan erkeklerin %20-40'ında görülebilmektedir. Organik ve/veya psikojenik bir nedene bağlı olan edinsel PE tedavi edilebilir bir durumdur. Yakın zamanda, hipertiroidizm gibi bazı hastalıkların edinsel PE etiyolojisinde yer aldığı kaydedilmiştir. Hipertiroidizm dışında erektil disfonksiyon, prostat hastalıkları, varikosel ve monosemptomatik enürezis gibi bazı ürolojik patolojilerin ve sünnet cerrahisinin de edinsel PE için risk faktörü oluşturabileceği gösterilmiştir. Ancak bu çalışmaların birçoğundaki bulguların kanıt düzeyi düşüktür. Bu derlemede PE için risk oluşturan ürolojik hastalıkların güncel literatür eşliğinde incelenmesi amaçlanmaktadır.

Anahtar sözcükler: Erektil disfonksiyon; monosemptomatik enürezis; prematür ejakülasyon; prostat hastalıkları; sünnet; varikosel

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Introduction

Premature ejaculation (PE) is considered the most common form of male sexual dysfunction.[1] The prevalence of PE ranges between 20% and 40% in sexually active men,[2,3] and it is more frequent than erectile dysfunction (ED) among men who are younger than 50 years.[4] The definition and types of PE are still controversial. The International Society for Sexual Medicine published an evidence-based definition of lifelong PE in 2008.[5] However, there is no adequate objective data to define acquired PE, which may occur at any time during a man's life due to organic and/or psychological causes.[5-7] Nevertheless, some authors claim that the criteria for lifelong PE may also be used to define acquired PE.[8]

Acquired PE, which occurs due to an underlying organic and/or psychological cause, may be a treatable clinical problem. Recent evidence has suggested that certain medical conditions (e.g., hyperthyroidism) may cause PE.[9-11] In addition, the literature has revealed several urologic risk factors that may predispose a man to acquired PE; these include ED,[1, 12-14] prostatic diseases, chronic pelvic pain syndrome

(CPPS),[4,15-21] varicocele,[22,23] monosymptomatic enuresis (ME)[24] and circumcision.[25,26]

This review aims to provide a systematic analysis of the literature regarding these urological risk factors for acquired PE.

Erectile dysfunction and premature ejaculation

Epidemiological studies demonstrated that almost half of the patients with ED also have PE complaints.[1,11,13] It is not clear whether ED (loss of erection while trying to control ejaculation) is the cause or the result of PE (rushed ejaculation before losing erection).[14] In addition, negative psychological consequences of PE, such as stress and anxiety, may also result in ED. In various studies, the effectiveness of phosphodiesterase-5 (PDE-5) inhibitors in the treatment of acquired PE with concomitant ED has been demonstrated.[12,27] The studies showed a correlation between intravaginal ejaculatory latency time (IELT) and improved erectile function among patients with acquired PE and concluded that PE severity may be associated with ED severity. [12,27] Therefore, recent guidelines recommend the use of PDE-5 inhibitors in patients with both PE and ED.[8]

In conclusion, while evaluating patients with PE, the coexistence of ED should be considered, and treatment should be planned accordingly.

Prostatic diseases and premature ejaculation

Chronic prostatitis (CP) and CPPS are frequent pathologies that severely affect quality of life.[28,29] CP is characterized by urogenital pain, ejaculatory pain, difficulty in urination and sexual dysfunction. Although the association between CP and PE was clearly demonstrated in various studies,[4,15-17] the exact mechanism of this relationship is not yet clear.

Screponi et al.[15] compared 30 healthy men with 46 PE patients and observed that the incidence of CP was higher among the PE patients. Shamloul et al. examined 153 patients with PE (94 lifelong and 59 acquired), 63.3% of whom had inflammatory cells in their urinary and prostatic secretions.[16] Interestingly, the authors observed that the incidence of chronic bacterial prostatitis and abacterial prostatitis was similar between the patients with lifelong PE and acquired PE. In a similar study, Liang et al. demonstrated that 49% of 1,768 patients with CP had sexual dysfunction.[4] The prevalence of PE was found to be 26.2%, and the duration of CP may have an impact on the presence of PE. They showed that PE prevalence was greater in patients with ≥19 months of CP-like symptoms than those with less than 19 months (44.2% vs. 24.4%, respectively).

In a recent survey of 7,372 randomly selected men, the prevalence of PE complaints was found to be 15.3%.[30] Of the men with PE, 64.1% had prostatitis-like symptoms.[31] The authors confirmed that PE prevalence was higher among patients with CP symptoms. In another study that included 399 patients with CP symptoms, 220 (55%) had ejaculatory dysfunction with 110 (28%) of these reporting PE.[19] Additionally, it was reported that PE was more frequent in patients with moderate or severe prostatic inflammation than the patients with mild prostatic inflammation. In addition, PE prevalence has been evaluated according to the NIDDK/NIH prostatitis classification, and the rates of collaboration with PE were 33% for category II, 29% for category IIIA, and 21% for category IIIB.

Several studies have demonstrated that antibiotic treatment improves IELT in CP patients, which provided further evidence regarding the association between prostatitis and PE. Boneff applied a hydrocortisone-antibiotic mixture to the posterior urethra via a catheter in 42 patients and demonstrated that IELT increased by up to 5 minutes in 52% of the patients.[32] El-Nashaar and Shamloul evaluated 145 patients with PE for at least 6 months and found microbial growth in their prostatic secretions, which were collected with prostatic massage in 94 (64.8%) of the patients.[20] They reported that one month of antibiotic therapy increased IELT in 62 (83.9%) patients, and no recurrence of PE or CP was observed after 4 months of antibiotic therapy. In a similar study, Zohdy et al. evaluated 210 patients with PE and CP, and they administrated antibiotics to 59% of these patients.[21] The increase in IELTs was higher in the treatment group, especially among patients with lifelong PE. Moreover, they found that IELT improvement was greater in patients with severe prostatic inflammation (70%) than in those with mild prostatic inflammation.

In conclusion, the high incidence of CP among PE patients, the increase in PE prevalence with long duration of CP symptoms, the decrease in IELT with severe prostatic inflammation and its improvement with antibiotic treatment suggest that CP may be an underlying cause in acquired PE patients. Therefore, PE patients, especially those with pelvic pain or urinary symptoms, should be evaluated for CP. Prostatic secretion analysis is an easy and cheap method for the detection of CP, and patients may benefit from antibiotic treatment.[33]

Varicocele and premature ejaculation

Varicocele is the abnormal dilatation of the pampiniformis plexus of the testis. Its incidence is 15% in the general population and 35% in primary infertile men.[22]

Recently, it has been demonstrated that varicocele may play a role in the etiology of acquired PE. Lotti et al. evaluated 2,448 patients with sexual dysfunction and demonstrated a higher prevalence of PE in patients with varicocele.[22] Moreover, those authors showed a relationship between the severity of varicocele on Doppler ultrasonography and seminal fluid IL-8 levels, which is an indicator of non-bacterial prostatitis. These findings suggest that the inflammation due to varicocele and/or prostatitis may cause PE. Moreover, the authors suggested that venous congestion due to the relationship between testicular and

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prostatic venous systems may trigger prostatitis in patients with varicocele. However, more evidence-based studies are required to determine the pathophysiology of both varicocele and PE to illuminate the relationship between them.

Monosymptomatic enuresis and premature ejaculation

In several recent studies, a higher prevalence of ME in patients with lifelong PE has been demonstrated, and a common neurological mechanism was hypothesized.[24,34,35] Although these recent studies included an appropriate methodology, larger series are required to illuminate the common pathogenesis to attribute ME as a definitive risk factor for PE.

Circumcision and premature ejaculation

Circumcision is a surgical excision of the prepuce. Some researchers indicated that the excessive excision of the preputial mucosa may decrease the sensorial innervations of the penis.[36] An international epidemiological study that supported this hypothesis demonstrated a higher prevalence of PE in a Middle-Eastern population than in other populations.[37] However, the results of the studies regarding penile sensitivity in circumcised men did not support this hypothesis.[38,39] Fink et al. showed that adult circumcision is associated with poor erectile function, decreased penile sensitivity and decreased sexual satisfaction without any changes in sexual activity.[38] In addition, Senkul et al. evaluated the sexual performance of 42 adult patients before and 12 weeks after circumcision and found no significant difference. However, they also demonstrated an improvement in IELT after circumcision.[40]

Waldinger et al. examined 500 patients from Holland, UK, USA, Spain and Turkey.[41] They found that IELT was shorter among Turkish men compared to others. Interestingly, there was no relationship between circumcision and IELT when the Turkish patients were excluded.

Circumcised mucosal length or circumcision age was not found to be related to PE presence.[42] However, Namavar et al. re-circumcised 47 patients whose prepuce was not excised properly and observed that IELTs increased significantly after re-circumcision.[43] In another study that included 216 patients who had an insufficient circumcision, it was noticed that the prevalence of PE was higher in these patients compared to a healthy population.[44] Gallo et al. detected a short frenulum in 59 (43%) of 137 patients with lifelong PE and demonstrated a significant increase in the IELTs of these patents after frenulectomy.[45]

Considering the above studies, circumcision does not seem to be a risk factor for PE. Larger series that focus on the genetic background of the societies that perform circumcision and the physiological burden of this surgery are needed to illuminate the relationship between PE and circumcision.

Conclusion

PE is the most common male sexual dysfunction, and PDE-5 inhibitors may be beneficial for PE patients with concomitant ED. Underlying inflammatory processes may increase the risk of acquired PE, and antibiotheraphy may be used in the treatment of PE patients with prostatitis or prostatitis-like symptoms. Further studies are required to determine whether varicocele, ME and/or circumcision may be considered to be risk factors for PE.

Conflict of interest

No conflict of interest was declared by the authors.

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