

New Perspectives Into Peyronie's Disease: Etiology, Management, and Prevention



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Although it was first reported by Fallopius in 1561, Peyronie's disease (PD) bears the name of Francois de la Peyronie who reported a case in 1743.¹ PD is characterized by penile induration, nodule, or plaque resulting in erectile deformity. Although PD is frequently linked to erectile dysfunction (ED), it is not clear how often it is or which comes first. Mulhall states "Elucidating the role preexisting ED plays in the development of PD remains a difficult task, as ED is also a known sequel of PD. What is unfortunately lacking in the literature is any detailed exploration of the timing of onset of ED and onset of PD, as only ED that precedes PD could confer a risk for PD development."²

After 275 years, there is still no consensus concerning the etiology of PD or its relation to ED, and while management of this disorder has evolved, satisfactory outcomes for the patient and his partner often do not result. Furthermore, there have been no strategies developed for the prevention of this disorder.

This commentary is based primarily on my 45-year experience in a urology subspecialty with a high proportion of men having either ED or PD. Those who would criticize a commentary based on such experience should keep in mind that published evidence for PD is not good. In the 2015 AUA Guideline on PD, there are 3 guideline statements on diagnosis and all are based on either clinical principle or expert opinion. Of 19 treatment recommendations, 5 are based on clinical principle and 2 are based on expert opinion. Of the remaining 12 evidence-based treatment recommendations, only 3 are based on level B evidence (moderate quality evidence and moderate certainty), whereas the remaining 9 are based on level C evidence (low quality and low certainty).³

PD is common in midlife men. In my opinion, the best evidence regarding its prevalence is from a multicenter study of men presenting for prostate cancer screening. They were asked to complete a Sexual Health Inventory for Men (SHIM) and have a penile exam by a sexual

health urologist. A total of 534 men who ranged in age from 40 to 75 completed the study, and a penile nodule was noted in 48 (8.9%). The presence of a nodule was significantly related to age, hypertension, diabetes, and ED as evidenced by a low SHIM score.⁴

ED is defined as "Consistent inability to attain or maintain an erection of the penis sufficient to permit satisfactory sexual intercourse." Later the phrase "on more than 50 percent of attempts" was added for clarification.⁵

Secondary ED, or ED that presents after a well-established period of normal sexual function, usually has underlying organic causes. But unless secondary ED occurs after trauma or pelvic surgery, it is preceded by a period of gradually diminishing erectile rigidity. I ask patients to grade the rigidity of their erections on a 10 scale where 10/10 was erectile rigidity when they were young. Men with erectile rigidity of 6-7/10 are usually able to have penetrative sex and thus they do not rise to the threshold of having ED.

Devine et al in 1997 suggested that poor rigidity during penetrative sex may lead to delamination injuries of the penile tunica albuginea resulting in scar and other manifestations of PD.⁶ I find it useful to compare penile fracture to PD. Penile fractures occur primarily in young men with normal (10/10) erections. The magnitude of the forces involved is great and the injury is dramatic with penile pain, swelling, and ecchymosis. The location of the injury to the tunica albuginea is usually at the base of the penis. In considering the Devine injury hypothesis for PD, it is easy to understand that forces involved are not nearly as great, many of the injuries are silent, and injuries usually occur more distally.

Men who are at risk for PD have erections with decreased rigidity yet these men are still capable of penetrative sex so the threshold of having ED has not yet been reached. I suggest that we call this prodromal phase erectile insufficiency (EI).⁷ Men with EI can have penetrative sex; however, penile bending during thrusting may lead to injury. Because the forces involved are not great, these injuries are often silent and may recur. Erections should not only be sufficient for satisfactory sex but they should also be sufficient for safe sex (sex that does not result in penile injury).⁷

Men with PD may not need treatment if their erectile deformity does not interfere with penetration and erections

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Submitted: November 7, 2018, accepted (with revisions): December 17, 2018

are still adequate for intromission. However, buckling injuries, often silent, may recur. I counsel these men on measures to prevent these recurrent injuries.⁷ Oral medications for ED (phosphodiesterase type 5 inhibitors) are generally not prescribed until men have ED. Earlier use of these medications in men who respond to them would decrease the likelihood of further injuries. Other measures include adequate lubrication, manual guidance of the penis for intromission or reintromission, avoiding partner on top positions, and not placing torque on the penis during thrusting. Penetrative sexual activity should be avoided when fatigue or the effects of alcohol are present.

Men with PD who are unable to have penetrative sex need therapy. Erections should be straight and reliably firm so that future injuries are avoided. If the response to a PDE5i is good, penile plication surgery is likely to straighten the erection without further diminution in erectile rigidity.⁸ If the man's erections are not reliable, inflatable penile prosthesis implantation should be considered. During the implant procedure device inflation straightens the penis, and if the degree of straightening is not satisfactory, it is further enhanced by modeling (bending the penis while the cylinders are inflated).⁹ A simultaneous straightening procedure is not usually needed.¹⁰

CONCLUSION

If the prodromal phase of EI is included, ED is invariably associated with PD and is the cause not the consequence

of this disorder. This knowledge can be used to effectively treat and help prevent PD.

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