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Unraveling the pathophysiology between ED and LUTS

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It is indeed a pleasure to be asked to comment on this important and excellent manuscript that is both exciting and perplexing. This important study drawn from the Olmsted County cohort, addresses the risk of erectile dysfunction in men with and without LUTS and with and without exposure to alpha blockers. The Olmsted County cohort is a powerful tool to address some of these issues that are otherwise not obtainable in the usual clinical context or via clinical trial or interventions.

This article offers an interesting missing piece of a puzzle in trying to unravel the issue of common pathophysiology between these two diseases. The authors go to great lengths to discuss the potential for causal relationships between LUTS and sexual dysfunction and appropriately refer to the Hill criteria in doing such. As far as the criterion for causality go, several attributes should be detailed when trying to link to diseases. In the 1990's numerous publications emphasize the common overlap between LUTS and ED in men. Since then a preponderance of well designed longitudinal studies seem to highlight a cause and effect relationship between the two. When viewed together these studies have demonstrated a reliable strength of association between the two diseases, inter study consistencies, and a dose response effect. The singular hardest point to determine in trying to fulfill the Hill criteria is that of temporality. This study helps fill that gap, but still issues of alternative explanations of bias, confounding analysis and randomness in study outcome should be kept in mind.

Every study has weaknesses and wrinkles that may offer avenues for additional insight as we learn more about this important relationship. The Olmsted County study uses the so called O'Leary score to address erectile dysfunction as well as other domains of sexual life. Less experience with the interpretation of this questionnaire and definitive cutoff between clinically significant function or not remain elusive. The authors use a categorical analysis of cutoffs as described. However, the validity of these cutoff points is not clear. The reader is warned that in view of this lack of clinically relevant cutoffs in the O'Leary scale makes any definitive function or dysfunction analysis controversial.

The authors appropriately excluded men without a regular sex partner, but it is clear that doing so may alter the prevalence of disease in this population. Any information resulting when the entire cohort is included would be interesting to see. Will the same relationship appear?

The authors note an improvement in LUTS as defined as a decline of two or more points in the symptom score. Why a two point change is considered important or clinically relevant escapes this reader. Other authors have validated three or four point changes as being clinically relevant. This might alter the interpretation of some of the findings contained herein.

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I urge caution in the authors' comments suggesting that it is likely that LUTS improvement will not result in sexual function improvement unless associated with bladder outlet obstruction. This statement is not supported from previous studies nor is it clear from the examination of this cohort. To claim that an improvement in LUTS without alpha blockers or surgery suggests that the lower urinary tract symptoms were not due to BPH or bladder outlet obstruction is contrary to the available information following surgical procedures, medical interventions and on the spontaneous improvement in LUTS/BPH. Ultimately these statements assume the etiology of LUTS in general is a settled question. The LUTS paradigm is in flux. Caution is suggested in predicting relationships without solid evidence.