

Short Communication

Standing cough test stratification of moderate male stress urinary incontinence

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Accepted 01 September, 2021

DESCRIPTION

Persistent stress urinary incontinence (SUI) affects 20% of men following prostatectomy, and up to 10% of men treated with pelvic radiation (Averbeck et al., 2019, Arcila-Ruiz et al., 2018). Men with mild SUI (<1 pad per day, PPD) tend to benefit from transobturator sling placement, while men with severe SUI (>4 PPD) are clearly better served by artificial urinary sphincter (AUS) placement (Bauer et al., 2017, Chua et al., 2019, Ficarra et al., 2012). Counseling patients with so-called moderate SUI (2-3 PPD), however, is less straightforward as these men are technically candidates for either intervention but tend to have variable degrees of SUI, and thus, variable outcomes (Fuchs et al., 2018, Hoffman et al., 2019, Khouri et al., 2021).

Although surgical treatment of male SUI is highly effective, it is underutilized. The incidence of post-prostatectomy SUI is reported to be anywhere from 8-40% depending on the study, however only 3.6% of men undergo surgical SUI intervention within two years of prostatectomy (Kowalczyk et al., 1996, Morey et al., 2017). Over a third of men who ultimately undergo AUS implantation have suffered from incontinence for over five years prior to placement (Morey et al., 2017, Nelson et al., 2020). Though best practices for obviously mild or severe SUI are clear, moderate SUI (2-3 PPD) is deemed appropriate for treatment with either a transobturator sling or an AUS, despite the fact that men in this subgroup actually exhibits highly variable degrees of SUI (Bauer et al., 2017, Chua et al., 2019, Ficarra et al., 2012, Khouri et al., 2021). It is possible that this controversy and uncertainty in how to surgically manage men leaking 2-3 PPD may contribute to underutilization and delays in intervention (Table 1).

Table 1. Appendix: Male Stress Incontinence Grading Scale (MSIGS)

Grade	Definition
0	No leakage
1	Delayed drops only
2	Early drops, no stream
3	Early drops, delayed stream
4	Early and persistent stream

While patient reported PPD is the most widely used metric to gauge the severity of male SUI because of its simplicity and non-invasive nature, it is also highly subjective in that it does not account for variations in patient activity level, type of pad used, and degree of wetting before changing pads. Determining SUI severity by 24-hour pad weight is more accurate and objective; however, it is not widely utilized as it is burdensome for both the patient and physician (Hoffman et al., 2019). Similarly, while urodynamics is sometimes used in the evaluation of male SUI, this testing is quite invasive, and moreover, recent studies have suggested that its role may be limited (Resnick et al., 2013, Scott et al., 2017).

The standing cough test (SCT) was first described by Kowalczyk et al in 1996 as a means to determine a patient's candidacy for tandem AUS cuff placement (Shakir et al., 2018). Though tandem AUS is no longer widely performed, given the recent AUA guidelines emphasizing the physical exam in evaluation of male SUI, we began incorporating the SCT into our clinical practice in 2014 (Sandhu et al., 2019, Tutolo et al., 2019). We then created the Male Stress Urinary Incontinence Grading Scale (MSIGS, Appendix A) to grade the severity of male SUI based on degree of leakage with in-office SCT

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(Sandhu et al., 2019). MSIGS has been extensively validated and correlates closely with 24-hour pad weights. (Tutolo et al., 2019) MSIGS 0-2 are favorable, representing mild to moderate SUI, while MSIGS 3-4 indicate severe SUI (Sandhu et al., 2019).

Nearly 40% of men presenting to our practice with self-reported mild-to-moderate SUI by PPD actually exhibit severe SUI on SCT (Khouri et al., 2021, Wilson et al., 2011). PPD, 24-hour pad weights, and MSIGS have all been shown to predict sling success (Bauer et al., 2017, Wolfe et al., 2021). However, in our experience, men with “moderate” SUI that is upstaged to severe on SCT have significantly lower sling success rates than their counterparts who truly exhibit moderate SUI on SCT (Khouri et al., 2021). In fact, each point increase in MSIGS score (0-4) confers an equal negative effect on the probability of sling success (Wolfe et al., 2021). Given that many men specifically present to tertiary referral centers like ours for transobturator sling placement, in-office SCT is clinically important in identifying men considered appropriate for sling placement by PPD who in actuality would be better served by AUS placement (Khouri et al., 2021). With 25-35% of men experiencing persistent post-operative SUI after sling placement, identifying those patients who are not appropriate sling candidates pre-operatively is of utmost importance in minimizing failed sling surgeries (Yi et al., 2020).

The beauty of MSIGS lies in its simplicity and clinical practicality. SCT can be performed as part of a standard office visit without adding significant additional time or cost to the encounter. The test takes under a minute to perform and requires no additional equipment. Moreover, SCT places no burden on the patient and requires absolutely no preparation or diary-keeping in preparation for the visit.

CONCLUSION

MSIGS reproducibly and efficiently scores the severity of male SUI by in-office SCT and is clinically useful in stratifying patients with moderate SUI as defined by PPD. SCT is a quick and practical tool easily incorporated into a standard office visit. Moreover, it accurately predicts sling success, identifying those patients at high risk for sling failure who would be more appropriately treated with AUS placement.

CONFLICT OF INTEREST

None declared

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