

The Urological Society of India Guidelines for the Evaluation and Management of Nonneurogenic Urinary Incontinence in Adults (Executive Summary)

These guidelines have been drafted by the Urological Society of India Urinary Incontinence (UI) Guidelines Panel and address “Nonneurogenic urinary incontinence in adults.” The guidelines are intended for urologists and the recommendations are updated till October 2018. These will remain valid until the next update or for a maximum period of 5 years. The guidelines should not be regarded as a rigid clinical pathway for every patient and are not intended to replace clinical judgment. This executive summary includes some salient aspects of the guidelines and the guideline statements. The guidelines document includes additional details regarding epidemiology, new definitions, a discussion on the guidelines recommendations, a position statement on mesh for stress incontinence, and a section on healthcare and cost of drugs in India. The complete guidelines document can be accessed from the Urological Society of India website at www.usi.org.in

Literature search was conducted on PubMed, Cochrane Central Register of Controlled Trials (including randomized and quasi-randomized trials from Embase and PubMed), Mendeley, and Directory of Open Access Journals. Each set of search was conducted twice, once for high level evidence (randomized trials and systematic reviews) and another time for all levels of evidence (LE) with geographical area restricted to “India.” Secondary evidence sources included citations from all published English language guidelines and reviews. LE was evaluated by the Centre for Evidence-Based Medicine method.^[1]

The guidelines panel based its final recommendations on the best available global evidence, Indian data as well as the socioeconomics of healthcare in India. Grades of recommendation (GR) (strong/moderate/weak) are the strength of mandate based on the extent of risk–benefit ratio of either taking or not taking an action. Clinical principle is a statement that is widely agreed upon by clinicians, for which there may or may not be evidence in the medical literature. Expert opinion is a statement agreed upon by the guidelines panel in the absence of evidence.

This guideline follows the joint International Urogynecology Association-International Continence Society terminology document of 2010.^[2] UI is defined

as “the complaint of any involuntary leakage of urine.” Stress UI is “complaint of involuntary loss of urine with effort or physical exertion, or on sneezing or coughing.” Urgency UI is “complaint of involuntary loss of urine associated with urgency.” Mixed UI is “complaint of involuntary loss of urine with urgency and also with effort or physical exertion or on sneezing or coughing.”

UI has been noted in 25%–45% of adult women in global studies.^[3] Studies from India show a prevalence of 10%–42% in nine population-based door-to-door epidemiological studies, with stress UI being the most common type.^[4–12] Age-adjusted prevalence progressively increased from the 3rd to 7th decade (5.6%, 14.2%, 27.3%, 34.3%, and 39.0%, respectively). This finding has important implications for health planning since the population of Indians older than 60 years is set to double from 117 million in 2015 to 246 million by 2040.^[13] Two noteworthy risk factors were delivery at home and pregnancy at young age.^[4,7,9] About 40% of women attributed incontinence to a natural consequence of aging.^[4,6,9] Social embarrassment (about 25%) was possibly more important than financial constraint (3%–14%) in determining help-seeking behavior.^[4,8,9]

In general, the prevalence of UI in men has been noted to be lower than women; however, the age-related trend is similar. A systematic review of 21 studies showed a prevalence of 3%–5% in young and middle-aged men and 11%–34% in older men.^[14] The guidelines committee could not find any study that looked at the prevalence in Indian men.

The committee examined the issue of access and usage of toilets in India. Inability to access a toilet facility in time can convert urgency in an individual with limited ambulation into UI.^[15] Although there has been a dramatic increase in toilet availability under the Swachh Bharat Mission,^[16] usage remains clouded by misplaced beliefs regarding personal hygiene and household sanctity.^[17]

Historical reports of postprostatectomy incontinence after radical prostatectomy ranging from 2.5% to 87% have improved with refinements in technology and technique. Currently, about 6%–9% of men undergoing radical prostatectomy are expected to require surgery for incontinence.^[18,19] In contrast, the risk of incontinence after benign prostate surgery is 1% or less.

GUIDELINE STATEMENTS

Evaluation of urinary incontinence

- 1.1 Carry out a clinical evaluation to categorize the type of UI (stress, urgency, mixed or incontinence associated with chronic retention) (Clinical Principle)
- 1.2 Baseline clinical evaluation should include clinical history, physical examination, and degree of bother (Clinical Principle), complete urine examination (LE-3, GR-strong), voiding diary (LE-2, GR-strong), and postvoid residual urine measurement (Expert Opinion)
- 1.3 Do not perform invasive urodynamics testing before initiating noninvasive treatment (LE-1 GR-strong)
- 1.4 Invasive urodynamics may be omitted before surgery in women with uncomplicated stress UI (LE-1, GR-moderate). All other women should undergo urodynamics before stress UI surgery (LE-3, GR-strong)
- 1.5 Invasive urodynamics is recommended in men and women with urgency UI before invasive therapies (LE-3, GR-weak)
- 1.6 Invasive urodynamics is recommended in men with postprostatectomy incontinence before surgical therapy (LE-4, GR-moderate)
- 1.7 A diagnostic cystoscopy is not recommended in the evaluation of UI in women (LE-4, GR-moderate). In men with PPI, a diagnostic cystoscopy should be performed before surgical intervention (LE-4, GR-moderate).

Conservative therapies

- 2.1 Patient education regarding lower urinary tract function and implications of UI should be an integral part of management (Clinical Principle)
- 2.2 Counsel patients that moderation of caffeine consumption (LE-2, GR-moderate), modification of fluid intake (LE-2, GR-moderate), treatment of constipation (LE-3, GR-moderate), and reduction of obesity (LE-1, GR-strong) can benefit patients with UI
- 2.3 Comorbid conditions and medications that may influence UI should be addressed as appropriate (Clinical Principle)
- 2.4 Pelvic floor muscle training (PFMT) is recommended for women with UI as initial treatment or in combination with other treatments (LE-1, GR-strong)
- 2.5 Routine use of biofeedback, pelvic floor stimulation therapy, vaginal cones, or continence pessary is not recommended (LE-2, GR-moderate)
- 2.6 PFMT is effective in the prevention and treatment of UI during pregnancy and postpartum (LE-2, GR-moderate)
- 2.7 Bladder training is effective in women with UI (LE-1, GR-strong)
- 2.8 Percutaneous tibial nerve stimulation is effective for the short-term treatment of women with urgency UI (LE-2, GR-moderate)

- 2.9 PFMT is recommended for men with PPI for more rapidly attaining their final continence status (LE-1, GR-strong). Routine use of biofeedback or pelvic floor stimulation therapy is not recommended (LE-2, GR-moderate).

Pharmacotherapy

- 3.1 Antimuscarinics (darifenacin, oxybutynin, solifenacin, tolterodine, trospium, fesoterodine, and propiverine) are appropriate for patients with urgency UI (LE-1, GR-strong)
- 3.2 Exercise caution while prescribing antimuscarinics in the elderly (LE-1, GR-strong)
- 3.3 Mirabegron is appropriate for patients with urgency UI (LE-1, GR-strong)
- 3.4 Combination of mirabegron with antimuscarinics is more efficacious than either drug alone (LE-1, GR-strong)
- 3.5 Consider propantheline in patients with financial constraint (LE-2, GR-weak)
- 3.6 Duloxetine may offer some benefit in the treatment of stress UI in women and PPI in men (LE-1, GR-moderate), but caution is advised in view of the potential for serious side effects (LE-2, GR-strong).

Invasive therapy for urgency urinary incontinence

- 4.1 Offer onabotulinum toxin A (LE-1, GR-strong) or sacral neuromodulation (LE-2, GR-moderate) in patients with refractory urgency UI, or when drug therapy is contraindicated or not tolerated.

Invasive therapy for stress urinary incontinence

- 5.1 Mid-urethral slings (MUS), autologous pubovaginal slings, and the open retropubic colposuspension are standard surgical options for a woman with uncomplicated stress UI (LE-1, GR-strong). Both transobturator and retropubic tapes using macroporous polypropylene mesh are appropriate (LE-1, GR-strong)
- 5.2 In women with mixed UI, initial treatment should be conservative with or without pharmacotherapy for urgency component (LE-1, GR-strong). Stress UI surgery is appropriate treatment in women with stress-predominant mixed UI (LE-1; GR-strong). Counsel regarding unpredictable resolution or worsening of urgency
- 5.3 Single-incision slings are a less invasive but less effective alternative to MUS (LE-2, GR-moderate)
- 5.4 Consider the use of customized mesh using established surgical principle in patients with financial constraint who desire MUS (LE-3, GR-weak)
- 5.5 Bulking agents are weakly effective in women with stress UI (LE-1, GR-moderate) and should be considered only when surgery is inappropriate or refused
- 5.6 Laser therapies are not recommended for the treatment of stress UI in women outside a research protocol (LE-2, GR-strong).

Surgery for postprostatectomy incontinence

- 6.1 Surgery should be offered after a minimum interval of 6 months following the initial prostate surgery (LE-4, GR-moderate). Confirm stable patency of any anatomical narrowing before offering PPI surgery (Clinical Principle)
- 6.2 For mild-to-moderate PPI, artificial urinary sphincter (LE-2, GR-moderate) and slings (LE-3, GR-moderate) are appropriate surgeries
- 6.3 For severe PPI, artificial urinary sphincter is appropriate (LE-2, GR-strong)
- 6.4 Inform patients that reoperation rates are significant with all the current surgical options for PPI (LE-3, GR-moderate)
- 6.5 Bulking agents are appropriate for short-term relief in men with mild PPI (LE-3, GR-weak).

Sanjay Sinha*, **Mayank Mohan Agarwal**¹,
Pawan Vasudeva², **Nikhil Khattar**³,
Vijay Kumar Sarma Madduri⁴, **Shirish Yande**⁵,
Kalyan Sarkar⁶, **Anita Patel**⁷, **Ajit Vaze**⁸,
Shailesh Raina⁹, **Amita Jain**¹⁰, **Manu Gupta**¹¹,
Nagendranath Mishra¹²

Department of Urology, Apollo Hospitals, Hyderabad, Telangana,

¹Department of Urology, Aster Ramesh Multispecialty Hospital, Guntur, Andhra Pradesh, ²Department of Urology, VM Medical

College and Safdarjang Hospital, New Delhi, ³Department of

Reconstructive and Female Urology, Medanta Hospital, Gurgaon,

Haryana, ⁴Department of Urology, All India Institute of Medical

Sciences, Jodhpur, Rajasthan, ⁵Department of Urology, Ruby Hall

Clinic, Pune, Maharashtra, ⁶Department of Urology, Vivekananda

Institute, Kolkata, West Bengal, ⁷Department of Urology, Global

Hospital and KEM Hospital, Mumbai, Maharashtra, ⁸Department of

Urology, Lilawati Hospital, Mumbai, Maharashtra, ⁹Department of

Urology, Jaslok Hospital, Mumbai, Maharashtra, ¹⁰Department of

Urogynecology, Medanta Hospital, Gurgaon, Haryana, ¹¹Department

of Urology, Sir Ganga Ram Hospital, New Delhi, ¹²Department of

Surgery, Division of Urology, Pramukh Swami Medical College,

Karamsad, Anand, Gujarat, India

*E-mail: drsanjaysinha@hotmail.com

REFERENCES

1. OCEBM Levels of Evidence Working Group. Levels of Evidence. The Oxford; 2011. Available from: <http://www.cebm.net/index.aspx?o=5653>. [Last accessed on 2019 Apr 09].
2. Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J,

et al. An international urogynecological association (IUGA)/International continence society (ICS) joint report on the terminology for female pelvic floor dysfunction. *Neurourol Urodyn* 2010;29:4-20.

3. Milsom I, Altman D, Cartwright R, Lapitan MC, Nelson R, Sjöström S, et al. Epidemiology of urinary incontinence (UI) and other lower urinary tract symptoms (LUTS), pelvic organ prolapse (POP) and anal incontinence (AI). In: Abrams P, Cardozo L, Wagg A, Wein A, editors. *Incontinence*. 6th ed. United Kingdom: International Consultation on Urological Diseases; 2017. p. 1-142.
4. Agarwal BK, Agarwal N. Urinary incontinence: prevalence, risk factors, impact on quality of life and treatment seeking behaviour among middle aged women. *Int Surg J* 2017;4:1953-8.
5. Gupta G, Saini N, Chhabra P, Suneja A. Impact of incontinence on the quality of life of adult female residents of Delhi. Available from: <https://www.ics.org/2017/abstract/927>. [Last accessed on 2019 Apr 09].
6. Prabhu SA, Shanbhag SS. Prevalence and risk factors of urinary incontinence in women residing in a tribal area in Maharashtra, India. *J Res Health Sci* 2013;13:125-30.
7. Seshan V, Muliira JK. Self-reported urinary incontinence and factors associated with symptom severity in community dwelling adult women: Implications for women's health promotion. *BMC Womens Health* 2013;13:16.
8. Kumari S, Singh AJ, Jain V. Treatment seeking behavior for urinary incontinence among North Indian women. *Indian J Med Sci* 2008;62:352-6.
9. Bodhare TN, Valsangkar S, Bele SD. An epidemiological study of urinary incontinence and its impact on quality of life among women aged 35 years and above in a rural area. *Indian J Urol* 2010;26:353-8.
10. Krishna Rao B, Nayak SR, Kumar P, Kamath V, Kamath A, Suraj S. Prevalence of pelvic floor dysfunction among married women of Udipi taluk, Karnataka, India. *J Womens Health Care* 2015;4:236-9.
11. Khan S, Ansari MA, Vasenwala SM, Mohsin Z. The influence of menopause on urinary incontinence in the women of the community: A cross-sectional study from North India. *Int J Reprod Contracept Obstet Gynecol* 2017;6:911-8.
12. Goyal A, Mishra N, Dwivedi S. A comparative study of morbidity pattern among rural and urban postmenopausal women of Allahabad, Uttar Pradesh, India. *Int J Res Med Sci* 2017;5:670-7.
13. World Population Prospects; 2017. Available from: <https://esa.un.org/unpd/wpp/Download/Probabilistic/Population>. [Last accessed on 2019 Apr 09].
14. Thom D. Variation in estimates of urinary incontinence prevalence in the community: Effects of differences in definition, population characteristics, and study type. *J Am Geriatr Soc* 1998;46:473-80.
15. Fritel X, Lachal L, Cassou B, Fauconnier A, Dargent-Molina P. Mobility impairment is associated with urge but not stress urinary incontinence in community-dwelling older women: Results from the Ossébo study. *BJOG* 2013;120:1566-72.
16. Swachh Bharat Mission. Available from: <http://swachhbharatmission.gov.in/sbmcms/index.htm>. [Last accessed on 2019 Apr 09].
17. Alexander K, Allton C, Felsman C, Hahn M, Okegbe T, Palmer D, et al. Ending Open Defecation in India: Insights on Implementation and Behavior Change for Swachh Bharat Abhiyan; 2016. Available from: https://www.princeton.edu/sites/default/files/content/India%20Workshop%20Report_FINAL_2.25.2016.pdf. [Last accessed on 2019 Apr 09].

18. Goyal NK, Kumar A, Trivedi S, Dwivedi US, Singh PB. Surgical complications of radical retropubic prostatectomy: A single institutional experience of seven years. *Indian J Urol* 2007;23:369-71.
19. Goldman HB, Averbeck MA, Bruschini H, Comiter C, Hanus T, Herschorn S, *et al.* Surgical treatment of urinary incontinence in men. In: Abrams P, Cardozo L, Wagg A, Wein A, editors. *Incontinence*. 6th ed. United Kingdom: International Consultation on Urological Diseases; 2017. p. 1629-740.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Financial support and sponsorship: Nil.

Conflicts of interest: There are no conflicts of interest.

Access this article online	
Quick Response Code:	Website: www.indianjurol.com
	DOI: 10.4103/iju.IJU_125_19

How to cite this article: Sinha S, Agarwal MM, Vasudeva P, Khattar N, Madduri VK, Yande S, *et al.* The Urological Society of India Guidelines for the Evaluation and Management of Nonneurogenic Urinary Incontinence in Adults (Executive Summary). *Indian J Urol* 2019;35:185-8.

© 2019 Indian Journal of Urology | Published by Wolters Kluwer - Medknow