3. Milsom I, Coyne KS, Nicholson S, Kvasz M, Chen CI, Wein AJ. Global prevalence and economic burden of urgency urinary incontinence: a systematic review. Eur Urol 2014;65:79-95.
4. Norton P, Brubaker L. Urinary incontinence in women. Lancet 2006;367:57-67.
5. Burkhard FC, Lucas MG, Berghmans LC, et al. European Association of Urology guidelines. Urinary incontinence. Available at: http://uroweb.org/guideline/urinary-incontinence/#4. Accessed Sept. 27, 2016.

 http://dx.doi.org/10.1016/j.ajog.2016.11.1023

REPLY

We thank Dr Jean-Nicolas Cornu and colleagues[1] for their comments regarding our article entitled "Factors influencing the incidence and remission of urinary incontinence after hysterectomy"[2] published in the *American Journal of Obstetrics and Gynecology*.

Our study showed that hysterectomy clearly influenced urinary incontinence (UI), as one fifth of the women experienced a change in their continence status post-hysterectomy. Vaginal delivery, obesity, and daily urge symptoms without incontinence prior to surgery increased de novo UI and had a negative influence on the rate of remission of UI after hysterectomy, which in turn influenced patients' satisfaction with surgery. De novo UI is a negative consequence of hysterectomy and remission of UI can be seen to be a positive development. Both are of importance when counselling patients contemplating a hysterectomy.

The study focused on the presence of UI and not the type of UI. We are well aware of the differences between types of incontinence and in this respect there was no "confusion" on our part. For our patients the occurrence of urinary leakage irrespective of whether it is of stress urinary type or of urge type is a highly disturbing issue.

Both stress UI and urge UI are common in women, however the relative proportions of these 2 types of incontinence do vary with age.[3] The prime aim of our study was to describe the incidence and remission of UI in women undergoing hysterectomy. In addition we studied possible factors influencing the incidence and remission rates of UI. One of the factors included in the logistic regression was the experience of daily urinary urge prior to hysterectomy in women without incontinence. Dr Cornu and colleagues correctly pointed out this could also have been expressed as overactive bladder without UI prior to surgery. Our study indicated that these women had a greater risk of incontinence following surgery, which is important knowledge for doctors and patients when considering a hysterectomy.

It would have been of interest to know to what extent antimuscarinic medication was being used but this information was not available in the data base.

In conclusion, because we analyzed UI alone without separation into stress UI or urge UI, we do not consider the analyses "blurred," as our specific aim was to study the influence of hysterectomy on the incidence and remission of UI, which was clearly presented. ■

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REFERENCES

1. Baron MG, Quicray M, Cornu JN. Comment on: Factors influencing the incidence and remission of urinary incontinence after hysterectomy. Am J Obstet Gynecol 2016.
2. Bohlin KS, Ankardal M, Lindkvist H, Milsom I. Factors influencing the incidence and remission of urinary incontinence after hysterectomy. Am J Obstet Gynecol 2016.
3. Milsom I, Altman D, Cartwright R, et al. Epidemiology of urinary incontinence (UI) and other lower urinary tract symptoms (LUTS), pelvic organ prolapse (POP) and anal (AI) incontinence. In: Abrams P, Cardozo L, Kouhry S, Wein A, eds. Incontinence. Paris: Health Publications Ltd; 2013.

 http://dx.doi.org/10.1016/j.ajog.2016.11.1024

Comment on treatment for recurrent vulvovaginal candidiasis

TO THE EDITORS: With great interest we read the article "Recurrent vulvovaginal candidiasis" of Jack D. Sobel.[1] The author presents oral and topical treatment strategies for recurrent vulvovaginal candidiasis. Therapy with oral fluconazole starts with an initial "induction therapy" and is followed by a maintenance phase, wherein the drug is given at certain intervals.[2,3]

Although a systematic review confirms the advantage of the use of weekly fluconazole for 6 months,[2] we missed the emphasis on the advantages of another, more individualized and patient-centered regimen that is common in Europe.[3] In this regimen, the total dose of fluconazole is more individualized to the outcomes ("ReCiDiF" regimen).[3]

Fluconazole is used weekly for only 8 weeks and is followed by dose reduction if the patient is symptom, culture, and microscopy free of *Candida*. After a period of 4 months of taking 1 dose every 2 weeks, patients can move on to the next level of maintenance treatment (monthly for 6 months), provided they are still symptom, culture, and microscopy free of *Candida*.

This regimen has several advantages compared with the 6 months/weekly regimen. Most women who experience recurrent vulvovaginal candidiasis do not need weekly fluconazole for 6 months; the optimal, and even suboptimal, responders received significant less total medication after 6 months than in the 6 months/weekly system.

Indeed, even if suboptimal responders stay for longer periods on their level of treatment to avoid clinical relapses, most of them do not need to be on weekly treatment. Clinicians and researchers should be aware of early identification of the group who had recurrences despite maintenance therapy and help them in a timely, more efficient way. Women on the ReCiDiF regimen were recurrence-free for a longer period of time and were shown to need less fluconazole per month than in the 6 months/weekly regimen. Furthermore, this regimen appears to prevent the frequent recurrences that are seen after suddenly stopping the 6 month/weekly period; after 1 year, 79% of the women were recurrence free in the ReCiDiF regimen[3] vs 43% after the 6 month/weekly treatment.[2]

This individualized fluconazole maintenance therapy is currently the standard of care in Belgium, Austria, and Germany[4] and produces high satisfaction and adherence rates in patients. Hence, we regret that the review failed to inform the reader about the advantages of the ReCiDiF approach and that it is was not highlighted in its summary table. ■

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REFERENCES

1. Sobel JD. Recurrent vulvovaginal candidiasis. Am J Obstet Gynecol 2016;214:15-21.
2. Rosa MI, Silva BR, Pires PS, et al. Weekly fluconazole therapy for recurrent vulvovaginal candidiasis: a systematic review and meta-analysis. Eur J Obstet Gynecol Reprod Biol 2013;167:132-6.
3. Donders G, Bellen G, Byttebier G, et al. Individualized decreasing-dose maintenance fluconazole regimen for recurrent vulvovaginal candidiasis (ReCiDiF trial). Am J Obstet Gynecol 2008;199:613.e1-9.
4. Mendling W, Friese K, Mylonas I, et al. Vulvovaginal candidosis (excluding chronic mucocutaneous candidosis). Guideline of the German Society of Gynecology and Obstetrics (AWMF Registry No. 015/072, S2k Level, December 2013). Geburtshilfe Frauenheilkd 2015;75:342-54.

 http://dx.doi.org/10.1016/j.ajog.2016.11.1029

REPLY

In a recent review of recurrent vulvovaginal candidiasis, treatment options were described for women in whom no preventable triggering stimuli were forthcoming.[1] A suppressive maintenance prophylactic regimen with fluconazole was recommended and indeed this regimen is widely used and appreciated worldwide. In the review, attention was directed at 1 such regimen consisting of the use of once weekly fluconazole (150 mg) for a period of 6 months.[2] Other alternative regimens were also immediately referenced including a more personalized but similar regimen of Dr Donders et al,[3] the text emphasizing that these maintenance regimens have documented therapeutic efficacy and safety. No attempt was made to compare efficacy of the different maintenance fluconazole regimens since there are no data of comparative efficacy. In the accompanying letter Drs Ginc and Donders claim that their regimen of fluconazole called "ReCiDiF" is superior to the widely used once-weekly fluconazole regimen. Unfortunately, as mentioned above, no comparative study has ever been performed! Given the obvious differences in patient populations and treatment regimens utilized, attempts to compare study outcomes are not possible. To claim an advantage of the ReCiDiF regimen is without merit and is contrary to the respected scientific standard. A prospective randomized blinded study comparing the different fluconazole regimens would be welcomed. ■

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REFERENCES

1. Sobel JD. Recurrent vulvovaginal candidiasis. Am J Obstet Gynecol 2016;214:15-21.
2. Sobel JD, Wiesenfeld HC, Martens M, et al. Maintenance fluconazole therapy for recurrent vulvovaginal candidiasis. N Engl J Med 2004;351:876-83.
3. Donders G, Bellen G, Byttebier G, et al. Individualized decreasing-dose maintenance fluconazole regimen for recurrent vulvovaginal candidiasis (ReCiDiF trial). Am J Obstet Gynecol 2008;199:613.e1-9.

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