

Letter to the editor

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Minardi et al¹ have described well-established risk factors for recurrent urinary tract infection (UTI) and have emphasized the importance of a clear communication with the patient in order to find out behavior at risk, channel right hygiene recommendations, and suggest necessary changes in life habits to prevent acute UTI episodes. There is general agreement that behavioral modifications and counseling should be attempted first to reduce the rate of acute UTI episodes and their associated discomfort.

Furthermore, the authors mentioned the guidelines of the European Association of Urology² for the treatment of acute infections and the prophylaxis of recurrences. In particular, they referred to the standard antimicrobial prophylaxis (continuous, intermittent, and postintercourse) and mentioned some alternative strategies as well. Unfortunately, no further details were provided on immunoactive prophylaxis, the most developed alternative to antibiotics for the prevention of recurrent UTI.

Among the products on the market, Uro-Vaxom® (UV) (OM Pharma SA, Geneva, Switzerland), a lyophilized lysate of 18 bacterial *Escherichia coli* strains, is at present the only prophylactic alternative to antibiotics recommended with a grade “B” by the European Association of Urology guidelines because of its good clinical efficacy established with a high level of evidence (1A) in two published meta-analyses of randomized placebo-controlled studies.^{3,4} A grade of “C” or “D” (no recommendation possible) was assigned to all other alternatives, including products of the same class and others such as cranberry or probiotics, due to the small number of weak clinical studies or conflicting results.

Naber et al’s meta-analysis⁴ was performed on five published randomized placebo-controlled studies with UV (OM-89), including a total of 1000 adult patients with an observation period of 6–12 months.^{5–9} There was a significant reduction in mean number of UTI episodes as percentage of placebo by –35.7% at 6 months and by –39.4%, including the value, at 12 months. The studies with the largest number of UTIs with placebo showed also the largest reduction of UTI events with UV. Significantly, more patients in the active group, compared with placebo, were free of any UTI episode at the end of the studies, regardless of the study duration ($P = 0.001$). As the number of UTIs was lower in UV-treated patients compared with placebo, there was a parallel reduction of antibacterial consumption with a standardized mean difference of –0.29 (95% confidence interval, –0.44; –0.14).

The pooled data also confirmed the good risk–benefit profile of UV. The differences of incidence of adverse events in comparative trials showed that they were only

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slightly more frequent in UV-treated patients than in placebo (+0.8%). No serious adverse events were attributed to UV in these clinical studies and no disease- or age-related mortality was recorded in the investigated population.

UV was registered a long time ago in Switzerland and Germany (1987) and it can be prescribed for prevention of recurrent UTI in more than 50 countries worldwide. Unfortunately, UV is not available in Italy, which may have been the reason why Minardi et al did not mention it. However, since the review was published in an international journal, readers should also be informed about the immunoactive prophylaxis of recurrent UTI with UV, a well-established and internationally recommended drug for the prevention of recurrent UTI. According to pharmacovigilance data, UV is a well-tolerated product (overall incidence of side effects, 4%) that can be administered in adults and children over 4 years old.¹⁰ New clinical studies are ongoing in order to better understand its mechanism of action, to confirm its long-term efficacy, and to explore new indications.

Disclosure

The author discloses the following conflicts of interest (within the last two years):

Basilea: investigator, consultant

Bionorica: investigator, consultant

Daiichi Sankyo: speaker at scientific meetings, scientific publication

GlaxoSmithKline: investigator, consultant

MerLion: investigator, consultant, scientific publication

OM Pharma: investigator, speaker at scientific meetings, consultant

Pierre Fabre: consultant, speaker at scientific meetings, scientific publication

Rosen Pharma: consultant, scientific publication

Sanofi-Aventis: speaker at scientific meetings, scientific publication

Vifor Pharma: investigator, speaker at scientific meetings, consultant

Zambon: investigator, speaker at scientific meetings

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The main aim of our paper was to review generally the current options and technologies available for treatment of urinary tract infections. The different classes of antibiotic have been cited in general, without entering into details about the use of individual antibiotics or their dosages. References concerning practical guidelines have been given for the reader to find more detailed information. It is also possible to find

adequate information on the most recent advances on the application of immune prophylaxis (although it cannot be used in all countries) in the European Association of Urology guidelines.¹

Currently, immune active prophylaxis is in use in many countries. However, its mechanisms of action and long-term efficacy are still under investigation. Therefore, neither this therapy, although interesting and promising, nor the drug Uro-Vaxom® (OM Pharma SA, Geneva, Switzerland), have been considered in our review, although we have provided some general references on experimental technologies and research on the immune response and the opportunity for the development of such vaccines.

Since the use of immune prophylaxis has been widely treated in the European Association of Urology guidelines,¹ we do not find that omitting a specific product from our review should deprive the reader interested in the treatment of urinary tract infections in their own research on this area.

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