This multicentric study concludes that pretreatment with dutasteride 0.5 mg for two weeks, four weeks and continuing it postoperatively for two weeks did not reduce blood loss and related complications significantly when compared to placebo in spite of reducing intraprostatic concentrations of DHT. There is variation in the baseline mean prostate volume among the three groups, the largest mean being in the dutasteride group. The complication rates seem to be higher than the contemporary series but the authors feel it is probably due to the prospective documentation of these events. Standardizing the operative procedure and ensuring that each center has similar distribution of the three groups will minimize the impact due to variation in techniques. Further studies incorporating these issues are likely to give a more emphatic verdict on this issue.

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placebo only (n = 25), primary immunization without boosters (n = 24) or primary immunization plus boosters (n = 26) using vaginal suppositories containing placebo or vaccine. Vaccine suppositories contained 10 strains of heat-killed uropathogenic bacteria (a total of 106 organisms from six strains of E. coli and one each of Proteus, Morganella, Klebsiella and E. fecalis in a polyethylene glycol base) and placebo suppositories had no vaccine organisms. Primary immunization consisted of three suppositories given at weekly intervals while boosters were given in three doses at monthly intervals after completion of the primary doses. All women were monitored for six months to record the number of infections and adverse events.

Analysis of data on UTIs caused by any bacteria showed the greatest difference in infection rates between patients in the vaccine plus boosters protocol compared to those receiving placebo only (P = 0.100). The proportion of patients remaining infection-free during the study was 16.7% in the placebo only arm, 25% in the vaccination without boosters arm and 46% in the vaccination with boosters arm. When only E. coli UTIs were considered in the analysis, UTI recurrence rates were significantly less in women given booster immunizations compared to placebo (P = 0.0015) and vaccination without boosters as compared to placebo (P = 0.038). Thirty per cent of patients in the placebo protocol, 57% in the vaccine without boosters protocol and 72.5% in the vaccine with boosters protocol remained free of E. coli infection.

When a subgroup analysis of sexually active women was performed, it was found that 72.7% (16/22) women receiving vaccine with boosters remained free of E. coli infection as compared to 17.6% (3/17) of those receiving placebo only (P = 0.0002). Furthermore, statistically significant lower E. coli infection rates were observed in vaccine-treated women with age < 52 years (P = 0.002), absence of a history of recurrent childhood UTIs (P = 0.003), greater than five UTIs in the previous year (P = 0.009), no history of a hysterectomy (P = 0.001), use of estrogen (P = 0.002) and oral contraceptive pills (P = 0.0001).

A quantitative analysis of anti E. coli IgA and IgG antibodies in the urine and vaginal fluid samples collected during the course of the study did not reveal any significant differences between the three groups. There were no significant adverse events associated with vaccine treatment. The authors concluded that vaginal mucosal immunization with a multivalent vaccine is safe and efficacious in reducing recurrence of E. coli UTIs with maximal benefit seen in sexually active women in the 20 to 50-year-old age group.

COMMENTS

Urinary tract infections are a major cause of morbidity in women and E. coli is the predominant organism in both community-acquired and hospital-acquired forms of the disease. Long-term antibiotic prophylaxis is often instituted for patients with recurrent UTI not controlled by conservative measures. Although this is an effective intervention for controlling infections, it carries the disadvantage of antibiotic-related adverse effects and introduction of drug resistance, which can limit its use. Moreover, the chances of a recurrent UTI return to the baseline level as soon as the antibiotic is stopped. As a result most of these unfortunate women are condemned to suffering from repeated bouts of infection, need frequent antibiotic treatments and remain prone to serious infections like acute pyelonephritis and its sequelae.

Recent studies on the induction of vaginal mucosal immunity to uropathogenic organisms through vaccine suppositories hold promise for the future to provide a convenient, effective and safe alternative to antibiotics in this group of patients. The major advantage of a mucosal immunization is the theoretical induction of local immunity resulting in the production of IgA antibodies. This prevents the onset of infection directly at the level of the initial source. In this way, mucosal antibody formation via vaginal vaccination may be more effective than parenteral vaccination. Moreover, the use of a polyvalent whole cell vaccine would induce immunity against a variety of bacterial antigens, which can provide a wider range of protection against the whole gamut of uropathogenic bacteria.

However, there still remain some challenges to overcome before such a treatment can attain widespread clinical applicability. The adequate dosage and treatment schedule is still empirical and needs to be studied further. Improvement in terms of vaccine composition is required to achieve protection from non-E. coli-pathogens, which continue to cause large-scale morbidity and mortality in the hospital inpatient population. Moreover, further research needs to be done with regards to the mechanisms of protection and immunological basis for the success of this form of treatment.

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