Traditional Chinese Medicine: An Alternative Treatment Option for Refractory Recurrent Urinary Tract Infections

To the Editor—With an annual incidence of approximately 150 million cases worldwide, urinary tract infection (UTI) represents one of the most common bacterial infections. Approximately 40% of women experience at least 1 symptomatic UTI during their lifetime, with approximately 25% suffering recurrent UTIs (RUTIs) [1]. Repeated antibiotic courses are often prescribed for treating and preventing RUTIs, resulting in multidrug and pandrug-resistant pathogens [2]. Urinary pathogenic Escherichia coli (UPEC) is responsible for 75%–90% of uncomplicated UTIs. Because of the multidrug and pandrug resistance of UPEC, these RUTIs can become refractory to antibiotic treatment. Effective alternative and complementary treatments will be valuable for these RUTIs. Traditional Chinese medicine (TCM), also termed herbal medicine, has been extensively used in China for thousands of years to treat diverse pathologies, including chronic and refractory infectious diseases [3]. The feasibility of TCM to treat refractory RUTI has not been well defined. We evaluated the effectiveness of TCM for RUTI caused by pandrug-resistant bacterial pathogens.

Thirty-four female patients (average age, 51.6 ± 15.4 years) with uncomplicated RUTI (defined as ≥3 microbiologically documented episodes of symptomatic UTI during the last year or 2 episodes during the last 6 months) were recruited. The annual incidence average was 6.6 ± 2.5 UTIs. UPEC strains were isolated from patients’ urine and were resistant to at least 8 antibiotics (pandrug resistance). They were treated with antibiotics at Western medicine hospitals but proved to be refractory to the treatment. These patients were treated with a 4-week course of TCM consisting of 10 herbs (Rhizoma Anemarrhenae, Cortex Phellodendri Chinensis, Angelica sinensis, Rehmannia glutinosa Libosch, Wolfspor-iacocos, Salvia miltiorrhiza, Rhubarb, Polygonum aviculare L., Dianthus superbus, and Talcum). After 2 weeks, 25 patients (73.52%) experienced significant symptomatic relief, and at 4 weeks, 30 (88.23%) recovered and 3 (7.5%) showed improvement. Follow-up at 6 months showed that only 4 (11.76%) of the recovered patients experienced recurrence, which is a much lower recurrence rate than that following antibiotic treatment. There were no adverse effects reported among these cases.

RUTI has become a great health problem because of the multidrug and pandrug resistance of the pathogens [4]. The development of new antibiotics and improvements in treatment strategy may alleviate the situation to some extent, but will not change the trend of increasing resistance; however, this can be alleviated and resolved via an alternative treatment strategy. The therapeutic principles and aims of TCM are completely different from that of antibiotic treatment [3]. Instead of focusing on etiologic pathogens, TCM considers the overall functional state of the patient [5]. TCM attempts to restore and improve the functional state disrupted by the pathogens [6]. Therefore, it is impossible for the pathogen to develop resistance to TCM. Here, we indicated that refractory RUTIs can be effectively treated with TCM. Although TCM lacks strict and rigorous clinical trials for many formulas, we believe its extensive use in China for thousands of years has proven its validity [7]. Therefore, to treat refractory RUTI, we suggest that TCM is a good alternative and complementary option.

Notes

Financial support. This work was supported by the National Key Program for Infectious Diseases of China (2013ZX10004-203, 2013ZX10004-217-002, 2013ZX10004805-006) and the National Basic Research Program of China (grant number 2009CB522602).

Potential conflicts of interest. All authors: No reported conflicts.

All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

References


* N. Z., L. H., S. L., and Y. W. contributed equally to this work.

Correspondence: Zeliang Chen, Institute of Disease Control and Prevention, Academy of Military Medical Sciences; 2Institute of Disease Control and Prevention, Academy of Military Medical Sciences; and 3Affiliation Hospital, Academy of Military Medical Sciences, Beijing, People’s Republic of China.