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Kurt G. Naber¹, Florian Wagenlehner², Michael Kresken³, Esther Wohlfarth³, Christina Bahrs^{4,5}, Beatrice Grabein⁶, Walter Ludwig Strohmaier^{7,8}

¹Department of Urology, Technical University of Munich, Munich, Germany

²Clinic for Urology, Pediatric Urology and Andrology, Justus-Liebig University of Giessen, Germany

³Antiinfectives Intelligence, Cologne, Germany

⁴Institute for Infectious Diseases and Hospital Hygiene, University Hospital Jena/Friedrich Schiller University, Jena, Germany

⁵Clinical Division of Infections and Tropical Medicine, University Clinic for Internal Medicine I, Medical University of Vienna, Vienna, Austria

⁶Department of Clinical Microbiology and Hospital Hygiene, LMU Klinikum, Munich, Germany

⁷Medical School Regiomed, Coburg, Germany

⁸University of Split, Croatia

Therapy of cystitis with nitroxoline-NitroxWin: Prospective, multicenter, non-interventional study and microbiological resistance surveillance

Abstract:

Introduction

According to the AWMF S3 guidelines, nitroxoline is one of the antibiotics of first choice for the treatment of uncomplicated cystitis (UC) in women. Under real-world conditions, the clinical effectiveness of nitroxoline should be tested in a prospective, multicenter, non-interventional study (NIS) and the resistance of *Escherichia coli* to nitroxoline.

Material and Methods

Patients with UC and treatment with nitroxoline (recommended dosage 250 mg 3 times daily for 5 days) were recruited by urologists, general practitioners and internists working in family medicine across Germany from April to December 2022 and followed up over a period of 21-28 days. The diagnosis and course of therapy were assessed using the ACSS questionnaire and laboratory tests (leukocyturia, etc.). Independently of the NIS, *Escherichia coli* urine isolates were collected in 23 laboratories in the period 2019-20 as part of a nationwide resistance surveillance and their sensitivity to nitroxoline was tested.

Results

Of 316 patients with a mean (SD) age of 57.2 (± 20.4 ; median 62.5) years who were included in the NIS, the therapy was clinically successful at the time of the "test of cure" in 193/248 (86.3%) in the per-protocol group and 193/263 (81.4%) in the intention-to-treat group. 96% of the patients rated the tolerance of nitroxoline as "very good" or "good". All 272 *Escherichia coli* isolates tested were nitroxoline-sensitive.

Conclusion

Nitroxoline achieved very good clinical results in NIS and showed a very favorable resistance situation in *Escherichia coli* urine isolates. Nitroxoline can still be recommended as the first-line antibiotic for the treatment of UZ in women.

Biography: Dr. Naber is Assoc. Professor of Urology at the Technical University of Munich and from 1975-2006 he was Head of the Urologic Clinic, St Elisabeth Hospital in Straubing, a teaching hospital of the Technical University of Munich, Germany. Dr Naber was President (1997-1999) of the Paul Ehrlich Society for Chemotherapy (PEG) in Germany, and President (1998-2000) of the Federation of European Societies for Chemotherapy and Infection (FESCI).

He was the President of the 2nd European Congress of Chemotherapy 1998 in Hamburg, Germany, and the President of the International Society of Chemotherapy (ISC) for Infection and Cancer (2005-2009). His research interests include urological infections, especially the microbiology and pharmacokinetics of antimicrobials for the treatment of UTI and prostatitis.

He is Honorary Member of the Slovak Society of Chemotherapy (1997), of the German Association of Urology (2010), of the International Society of Chemotherapy (2013) and he received his doctor degree honoris cause (Dr.h.c.) from the St. Elizabeth University, Bratislava, Slovakia (2007).