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Evaluation of knowledge and perception of antibiotic use, resistance and strategies toward antimicrobial stewardships in urology

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Introduction & Objectives: Proper management of infections is of paramount importance to achieve the best outcomes and to minimise antibiotic resistance. However, there is some points the require attention about the knowledge about how to deal with infections. Our purpose was to assess the perception and knowledge about multidrug-resistant organisms and antibiotic use in Urology.

Materials & Methods: A cross-sectional survey was conducted among urologists. We adapted a questionnaire designed by Pulcini and modified by Navarro-San Francisco (permission was obtained) which collected the knowledge about multidrug-resistant organisms, habits in the antibiotic prescription process and perceptions on the activities aimed to improve antibiotic use. The attitudes about antibiotic prescribing were evaluated using a 5-point Likert-style scale with response options from very unhelpful/unimportant/unconfident to very helpful/important/confident. The knowledge of the prevalence of antibiotic resistance was assessed using multiple choice questions about the perceived prevalence of Escherichia coli resistance to quinolones, extended-spectrum betalactamase (ESBL) producing bacteria and Staphylococcus aureus resistance to methicillin.

Results: The survey included 52 questionnaires. Although up to 66% had prescribed more the three antibiotics in the previous week, 46,2% of the urologist considered their training regarding antibiotics insufficient. Moreover, up to 92% of the participants had not received specific infectious training. The percentage of urologists that was not confident regarding treatment with a combination of antibiotics is required was 23.4% and, 59.6% were not confident regarding antibiotic interactions with other drugs. Most of the urologists considered that antimicrobial resistance was a significant problem at the national level (100%), at their institution (98.1%), and for their daily practice (90.4%). The local rates of quinolone resistant E. coli and ESBL-producing E.coli were not known by 13.5% and 30.8% of the participants; and many participants did not estimate correctedly. The use of broad-spectrum antibiotic agents and unnecessary antibiotic prescription were considered the main reasons for the development of resistance. Conversely, antibiotics use in cattle (39.9%), poor hygiene (33,4%) were not considered as causes of resistance in the percentage of participant indicated.

Conclusions: Although most urologists believed that antibiotic resistance was a leading problem, it is required to improve the training regarding antibiotic stewardship, management and prevention infections and multidrug-resistant microorganisms.