

Correspondence

Antibiotic resistance pattern and empirical therapy for urinary tract infections in children

To the editor

I carefully read the article by Al-Harathi and Al-Fifi¹ on the antibiotic resistance pattern and empirical therapy for urinary tract infections in children. The authors extensively studied types of uropathogens causing urinary tract infections (UTIs) in Saudi children and addressed antibiotics resistance of these uropathogens. The authors raised an important concern whether we still have in pockets an empirical antimicrobial resort(s) to treat childhood UTIs. Actually, the patterns of uropathogenic resistance are in a state of potential change as ongoing new antibiotics are discovered and set into clinical practice. Thus, it remains a matter of considerable concern for health authorities in both developing and developed countries. This concern was thoroughly investigated in Iraqi children.² It revealed that the commonly encountered uropathogens causing childhood UTIs in a descending order included: *Escherichia coli* (52.2%), *Proteus mirabilis* (15.2%), *Enterobacter species* (10.9%), *Pseudomonas aeruginosa* (6.5%), *Klebsiella species* (6.5%), *Staphylococcus aureus* (6.5%), and mixed uropathogens (2.2%). The cumulative in vitro antibiotics resistance of these tested uropathogens was ascertained too. Cefotaxime, nitrofurantoin, and gentamicin were the most effective in vitro antibiotics while ampicillin and amoxicillin were the least effective. However, cephalothin and co-trimoxazole were moderately effective. Both Iraqi and Saudi studies shared the conclusion that parenteral 3rd generation cephalosporin, notably cefotaxime and ceftriaxone still represents an effective empirical chemotherapy in treating complicated cases of childhood UTIs or in situations where pending the results of urine culture and sensitivity is not feasible. However, resistance to 3rd generation cephalosporin is increasingly reported worldwide.^{3,4} In addition, both studies agreed that the commonly used orally administered antibiotics, notably ampicillin, co-trimoxazole, and cephalothin are no longer trusted as empirical chemotherapies because of highly reported resistance, an observation

recently supported.⁵ Easy procuring of over-the-counter antibiotics without prescriptions, absence of antibiotics prescribing guidelines, and inadequate information on the patterns of uropathogenic resistance substantially contribute to the emergence of resistant strains.^{2,6,7} Therefore, regular contemplation of nationally-based surveillances to determine cut-off points in vitro uropathogenic resistance and adoption of strict policies for antibiotics prescription and dispensing are crucial parallel pavements to follow.

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Reply from the Author

No reply was received from the author.

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