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Old oral antibiotics can be suitable alternatives to glycopeptides and new antimicrobial agents for therapy of skin infections caused by methicillin-resistant *Staphylococcus aureus* (MRSA)

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INTRODUCTION

Infected skin lesions, mostly caused by staphylococci, are an important cause of morbidity and antibiotic prescription in particular in at-risk patients, such as those with diabetes mellitus or vascular insufficiency of the limbs. In the current era of both reduced economic resources and increased bacterial resistances, possible alternatives to glycopeptides for therapy of MRSA infections are welcome. Within a surveillance programme for control of antibiotic prescriptions in patients attending our outpatient clinic for infected skin lesions, we revised medical charts of those subjects with MRSA isolates and their antimicrobial susceptibility patterns.

MATERIALS AND METHODS

During the years 2010 and 2011, we managed 37 subjects with skin infection. Among them, 40 non-repetitive strains of MRSA were isolated from biopsy, aspirate, or sterile swab and identified by standard culture semiautomated systems.

RESULTS

All 40 MRSA isolates were susceptible to vancomycin, teicoplanin, linezolid, and tigecycline (three out of three also to daptomycin), but many of them were also sensi-

tive to rifampin (75%), and primarily to tetracycline and cotrimoxazole (90% to both). Only 25% and 2.5% of strains were susceptible to clindamycin and levofloxacin, respectively. The use of glycopeptides, linezolid, or tigecycline was required only for one MRSA strain that was resistant to all other antibiotics, whereas at least two alternative agents were active *in vitro* against 38/40 (95%) isolates. The daily cost of oral antistaphylococcal therapy provided by the hospital pharmacy ranges from 0.14 euro for cotrimoxazole to 1.36 euro for clindamycin, whereas teicoplanin therapy (400 mg/day) costs 35.13 euro per day, and both intravenous and oral linezolid costs 122.50 euro per day.

CONCLUSION

In an era of increased economic costs and bacterial resistances, therapy of infections with old and cheap antimicrobial agents can be a suitable alternative to more potent and expensive molecules. In our experience, the vast majority of skin lesions infected by MRSA could be efficaciously treated with oral antibiotics, in particular cotrimoxazole, rifampin, and tetracyclines, so sparing rescue agents for therapy of serious multiresistant gram-positive infections (glycopeptides and new antibiotics such as daptomycin, linezolid, and tigecycline).