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Poor antimicrobial therapy, commendable candour

EDITORIAL

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At a Norwegian local hospital, ciprofloxacin use deviated from therapeutic recommendations in more than nine out of ten patients. Doctors must comply more closely with guidelines for antibiotic use.

Andreassen and colleagues are to be commended for publishing a report on the incorrect use of ciprofloxacin in a local hospital (1). Ciprofloxacin was used in a manner inconsistent with therapeutic recommendations during 45 of 49 hospital stays. Given that ciprofloxacin is one of the most toxic antibiotics we have, and one of the most resistance-driving antibiotics, this is an alarming finding.

All Norwegian hospitals must have an antimicrobial stewardship programme that promotes rational use of antibiotics. The aim is to reduce the use of broad-spectrum antibiotics in hospitals by 30 % (2). One of the most effective interventions for achieving this aim is 'audit with feedback'. This entails obtaining an overview of how current practices compare to a given standard, and then attempting to address any shortcomings with respect to the guidelines. The audit should be repeated after six to twelve months to assess compliance with the programme. Andreassen and colleagues describe one such audit, although they do not provide details about its effectiveness.

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The rational use of antibiotics means administering antibiotics for appropriate indications and at the correct dose, for periods long enough to kill the pathogenic bacteria, but short enough to ensure that the normal microbial flora is changed as little as possible. Other Norwegian studies have shown that university hospitals, too, administer broad-spectrum antibiotics too often, in doses that are too high, and with treatment durations that are too long (3–5). Narrow-spectrum antibiotics are less likely to drive antimicrobial resistance than broad-spectrum antibiotics (6) and should be preferred whenever possible. Adjusting antibiotic use on the basis of microbial findings can contribute to reduced use of broad-spectrum antibiotics as well as reduced costs (6, 7). At the hospital in the current study, antimicrobial therapy was not adjusted when it was possible to do so. The microbiologist's work in determining the resistance profiles was in vain.

Andreassen and colleagues point out that the overdiagnosis of penicillin allergy contributed to the incorrect use of antibiotics. In two other Norwegian studies, 10 % of patients were considered to be allergic to penicillin (4, 5). The actual incidence of anaphylactic reactions to penicillins is likely to be less than 1 % (8). A greater focus on the overdiagnosis of penicillin allergy is therefore also needed as part of antibiotic stewardship programmes (8).

One of the prerequisites for a successful antimicrobial stewardship programme is the availability of up-to-date guidelines on antibiotic use. Guidelines should be a distillate of the best possible scientific evidence based on the current resistance situation, and should support physicians in making wise decisions. The Norwegian Directorate of Health has unfortunately not updated the national guidelines for antimicrobial therapy in hospitals in eight years. In the meantime, a number of randomised clinical trials of common infections have shown that if the patient responds clinically, shorter treatment is not inferior to long-term treatment (9). The results of these studies should be incorporated into the new national guidelines.

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In a Norwegian qualitative study of factors that influence doctors' prescribing of antibiotics (as yet unpublished), we found that doctors were motivated to engage in rational prescribing of antibiotics. But uncertainty and fear of overlooking serious infections, a lack of supervision, and intense work pressure contributed to suboptimal treatment. The findings in this study are probably transferable to other Norwegian hospitals too.

Hospital managers and the authorities must do more in the fight against antimicrobial resistance – and there is no time to waste. Up-to-date guidelines are the basis for improving prescribing practices. Any decision to deviate from

the guidelines should be documented in the medical records.

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