The compliance of clinicians and patients cannot be globalized

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The evaluation of therapeutic management by multicentre studies and the results of multiple studies performed in different regions play an important role in helping to give a scale to the quality of care in infectious diseases, especially for deadly diseases. However, this poses different problems. The first problem is that the quality of management is very different from one place to another. As an example, for the treatment of endocarditis, a shortened delay for surgery and the intrinsic quality of the surgeon are probably the main elements in the survival rate of patients [1]. Indeed, most centres with efficient results for the treatment of endocarditis have an extremely high proportion of patients treated by early surgery. There is also a linear correlation between the surgery rate and the survival rate evaluated at 3 months. These studies evaluated primarily the network management quality between infectious disease, cardiac surgery and specialist cardiologists. This is obviously not globalizable.

The second point is compliance, including the doctor's compliance. Patients are often treated successively with three or four lines of antibiotics without stringent documentation of the failures. Is the failure a result of an abscess or a further healthcare-associated complication rather than being an antibiotic failure? This is frequently caused by a lack of clear and simple protocols applied by experienced doctors without subjectivity.

Patient compliance is also one of the more frequent causes of failure, as recently observed in pre-exposure chemoprophylaxis for human immunodeficiency virus (HIV). A study published in the *New England Journal of Medicine* included 2499 HIV-seronegative men or transgender women who have sex with men who were receiving a combination of antiretroviral drugs or placebo. The authors observed a 44% reduction in the incidence of HIV in the group treated with antiretroviral drugs versus placebo and a high compliance documented by serum dosage levels [2]. Conversely, other studies, performed among African women do not demonstrate such efficiency but the compliance was low [3,4]. Consequently, as for management quality, compliance cannot be globalized.

In the experience of one of the authors (DR), when the clinician explains comprehensively the side effects and the potential deadly consequences of non-observance, the compliance rate increases dramatically. As an example, very few patients followed by DR and treated with a combination of doxycycline and hydroxychloroquine for *Tropheryma whipplei* and *Coxiella burnetii* infections have photosensitization, although our reference centre is frequently contacted by clinicians because their patients are intolerant to such treatment. The repetition of explanations during each consultation and the persuasive power of each clinician are key elements in promoting compliance. Interestingly, in oncology, where clinicians have a culture of strictly following protocols, we do not observe as much switching between drugs, despite frequently severe side effects.

Overall, compliance is a major element in the management of patients with infectious diseases that should be systematically evaluated before reaching the conclusion of 'failure' [5]. Furthermore, the lack of compliance is cultural in some populations and compliance depends on the age, sex, culture and geographic provenance, limiting global analysis of international cohorts.

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