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Editorial

Motivational interviewing to improve treatment adherence

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1. Patients' perceptions and rapport with healthcare professionals strongly impact treatment adherence

Treatment adherence is the extent to which patients engage in behaviors they have agreed on with a healthcare professional, such as taking medications, following a diet, or making lifestyle changes. When starting or changing a treatment, shared decision-making between the patient and healthcare professional aims to strengthen the therapeutic alliance while giving attention to the patient's values and preferences, thereby potentially maximizing treatment adherence [1].

Treatment adherence is no better in rheumatology than in other specialties that deal with chronic diseases. Good adherence defined as a mean medication possession ratio (MPR) above 80% was found in only 36.8% and 51.2% of patients with gout and osteoporosis, respectively [2]. The mean MPR was higher in patients with hypertension and type 2 diabetes (72.3% and 65.4%, respectively) but was far lower in those with epilepsy (60.8%). In patients with chronic inflammatory rheumatic diseases (cIRDs), imperfect adherence is increasingly recognized as a major obstacle to successful treatment that must be identified and addressed [3]. Clinicians should also be alert to non-acceptance, or failure to start a prescribed treatment, notably in patients with osteoporosis and in those given a first prescription of a biologic agent.

Among the factors that influence treatment adherence, the patient's perceptions of the disease and rapport with the prescribing physician play a central role. In patients with cIRDs or osteoporosis, factors reported to decrease adherence include negative views about the treatments, limited awareness that treatment is necessary, concern about side effects, inadequate knowledge about the disease, and poor rapport with the physician [4,5]. Psychological disturbances in the patient and a perception that the mode of administration is ill-suited to the patient's lifestyle may also adversely affect adherence [4,5].

2. Motivational interviewing: Evidence for a role in improving treatment adherence

Improving treatment adherence is an elusive goal [6,7]. The strong impact of patients' perceptions on adherence supports a role for techniques that focus on personal factors, such as therapeutic patient education (TPE) and motivational interviewing.

Four categories have been suggested for classifying available methods designed to increase treatment adherence (Box 1) [7].

Box 1: Categories of interventions designed to improve treatment adherence [7].

Educational interventions aim to improve patient knowledge of the disease and symptoms, the mechanism of action of the treatment, the consequences of non-adherence, and the potential side effects of the treatment. *-**

Behavioral interventions promote medication taking and/or enhance adherence by providing incentives for medication taking such as text messages and/or a motivational interview.*-**

Cognitive behavioral interventions alter thinking patterns that contribute to non-adherence and establish behavioral patterns that support adherence, for instance via training in problem-solving.*-**

Multicomponent interventions combine several strategies such as educational, behavioral, cognitive behavioral, motivational, and/or support provision interventions.*-**

* or **: extent to which motivational communication can be incorporated within the intervention (author's opinion).

Motivational interviewing belongs to the behavioral category, although some measure of overlap exists across the four categories. For instance, the type of TPE provided in France involves more than simple information, and both TPE and cognitive behavioral therapy (CBT) can include components of motivational interviewing.

Motivational interviewing was first described in 1983 by Rollnick et al. as a brief intervention designed to help patients who were addicted to alcohol [8]. Starting in 1990, the technique was extended to other chronic health conditions whose treatment required a behavioral change driven by patient motivation [8]. The style of the motivational interview is designed to activate the patient's own motivation toward change and treatment adherence [8]. Rollnick et al. have stated that motivational interviewing "is not a technique for tricking people into doing what they do not want to do. Rather, it is a skilful clinical style for eliciting from patients their

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own good motivations for making behavior changes in the interest of their health. It involves more teaching than directing, dancing rather that wrestling, listening at least as much as telling". (Box 2).

Box 2: The principles of motivational interviewing [8].

RULE: Resist, Understand, Listen, and Empower

R: Resist the righting reflex

Do not argue with the patient, as this merely induces resistance to the suggested change. This attitude is particularly important with ambivalent patients. "It is a natural human tendency to resist persuasion."

U: Understand your patient's motivations

It is the patient's own reasons for change, and not yours, that are most likely to trigger behavior change. And so a second guiding principle is to be interested in the patient's own concerns, values, and motivations..

L: Listen to your patient

When it comes to behavior change, the answers most likely lie within the patient, and finding them requires some listening.

E: Empower your patient

A fourth guiding principle is empowerment- helping patients explore how they can make a difference in their own health. An important role is to support their hope that such change is possible.

This patient-centered approach [9] is tied to two main characteristics, ambivalence and resistance to change. Ambivalence is the simultaneous presence of contradictory desires, i.e., of the wish to change and the wish to maintain the *status quo* [8,10]. Resistance to change can be reinforced by inadequate patient-physician communication, an example of which is an urge to correct that leads the physician to argue forcefully against the patient, to express value judgments through words or body language, or to downplay the patient's efforts. The goal is not to supply external evidence supporting change but to guide the patient toward strengthening his/her own desire for change [8–10]. When a major change in lifestyle or medication is recommended, an ambivalent attitude should be expected: the need for the change is resisted by concern about the change itself. Motivational communication seeks to help the patient see the contradiction between non-adherence behaviors and life goals or values [8].

Motivational interviewing is a journey accomplished with the patient by alternately listening and speaking (open-ended questions, reformulations, summaries) [8,11]. Specific training of the healthcare professional in this technique is therefore needed.

3. Motivational interviewing has been proven effective in many health conditions

The effectiveness of motivational interviewing in improving treatment adherence in patients with chronic diseases has been extensively evaluated by several meta-analyses and systematic literature reviews. Motivational interviewing improved adherence according to a study of 17 randomized controlled trials (RCTs) comparing individual face-to-face or phone motivational interviews, of variable duration, to standard care [12]. Of the 17 RCTs, 10 were done in patients living with the HIV. Only two RCTs were in the field of rheumatology (osteoporosis [13] and rheumatoid arthritis (RA) [14]), and neither found a significant effect on adherence. Studies in which the proportion of patients with good treatment adherence was the primary outcome measure showed moderate efficacy, with a relative risk of better adherence in the motivational interviewing groups of 1.17 (95% confidence interval [95% CI], 1.05–1.31; $P<0.01$). In studies reporting adherence rates, the mean standardized difference was 0.70 (95%CI, 0.15–1.25; $P<0.01$) in favor of motivational interviewing [12].

A more recent study also found that motivational interviewing was effective compared to standard care in a variety of health conditions including epilepsy, chronic kidney disease, diabetes, HIV infection/AIDS, hypertension, schizophrenia, osteoporosis, and psychotic disorders [15]. However, the effect size was small, at 0.12 (95% CI, 0.05–0.20; I^2 heterogeneity, 1%). Efficacy was greatest when the intervention consisted only in motivational interviewing by specially trained professionals. A systematic review of studies in conditions that more closely resemble cIRDs (psoriasis, inflammatory bowel disease, and multiple sclerosis) demonstrated that multicomponent interventions including motivational interviewing improved medication adherence [7].

4. Motivational interviewing in rheumatology: proof of efficacy is still awaited

Motivational interviewing has not been widely used in rheumatology. A 2016 literature review sought to identify interventions capable of improving treatment adherence in patients with cIRDs [16]. Of 23 identified studies, only 1 used motivational interviewing, which was not effective [14]. In addition, among 22 studies identified by another literature review of methods designed to improve adherence to disease-modifying antirheumatic drug (DMARDs) in patients with cIRDs , only 3 focused on motivational interviewing [6]. Among them, 1 was an RCT in 18 patients with RA and inadequate treatment adherence [17] and showed that adherence improved significantly ($P=0.022$) after an individual CBT-like intervention provided by a psychologist. The intervention involved identifying practical factors or perceptions that might affect adherence, exploring ambivalence, discussing the risk/benefit ratio, and taking the patient's beliefs into account. Another of these 3 RCTs included 64 patients with RA who were deemed at risk for depression or cognitive-behavioral dysfunction [18]. During 10 individual weekly CBT sessions, a wide variety of topics were broached based on each patient's needs, including pain, fatigue, mood disorders, and impaired social functioning. After 12 months, treatment adherence was significantly better compared to baseline in the CBT group but was worse in the control group. Finally, the third RCT studied 123 patients with RA and poor adherence to DMARD therapy [14]. The intervention consisted in two motivational interviewing-type group sessions led by the same pharmacist. After 12 months, adherence was improved in both the intervention and the control groups, with no significant difference between groups.

A vast RCT in 2097 patients with osteoporosis, most of whom were on oral bisphosphonate treatment, showed no effect of telephone counseling sessions by trained and supervised health education professionals (mean number of sessions, 7) [13].

Motivational interviewing has also been considered as a means of improving adherence to lifestyle changes in patients with rheumatic diseases. An RCT in 216 patients with fibromyalgia evaluated the effects of 6 motivational interviewing sessions [19]. A moderate increase in physical activity was noted in the intervention group compared to the control group. Similarly, another recent study found moderate efficacy in increasing physical activity among patients with knee osteoarthritis or RA [20].

5. A communication style that deserves incorporation into clinical practice and research agendas

Unknowns remain regarding the optimal motivational interviewing technique. Individual sessions may be more effective than group sessions. Repetition increases efficacy, as previously reported

for TPE [6]. Patients experiencing ambivalence about their treatment are most likely to benefit and must therefore be identified [8]. The inclusion in several studies of unselected patients, some of whom had good treatment adherence [13,19], decreased the ability to demonstrate efficacy. Other studies used group-based interventions in non-adherent patients whose level of motivation was not assessed [14]. This last situation carries a risk of reinforcing non-acceptance, particularly as group motivational interventions require considerable expertise.

In conclusion, motivational interviewing can contribute to improve treatment adherence. Basic training should be provided to physicians to improve their style of communication with their patients. Motivational interviewing is a powerful tool for exploring what leads individual patients to want to take care of their health and to avoid potential conflicts related to non-adherence. Proof of efficacy has been obtained in various chronic diseases, although not in rheumatology. Many areas remain to be explored with the goal of optimizing and evaluating the best motivational interviewing method. Individual sessions may be more effective than group sessions. The scope of group sessions should probably extend beyond non-adherence to include other topics where support can be provided, as performed during TPE and CBT. The data needed to resolve these issues in rheumatology are not available, and a vast field of research remains to be explored.

Disclosure of interest

The authors declare that they have no competing interest.

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