The appearance of pharmacological treatments in the 1950s was a milestone in modern psychiatric history. Today, the goals of psychiatric treatment are to reduce and, ideally, eliminate symptoms, and prevent new episodes of illness. The final objective is remission, an asymptomatic state in which the patient returns to a fully functional personal, family, and social life. With psychotropic drugs, therapy has changed from a moral and human approach to treatment based on the biopsychosocial concept of the illness, as defined by the World Health Organization (WHO).

While drugs are effective in treating psychiatric disorders, some patients have no or only a partial response to treatment. This affects not only the patient, but also the family and the professionals caring for that patient. The lack of response should be considered as a multifaceted problem, involving variables inherent to the illness itself, as well as those relating to the patient and psychosocial factors. Although it may seem very basic, one of the main factors to be considered when evaluating a patient responding poorly to treatment is the way in which the treatment is being carried out.

There are two concepts related to the way in which treatment is carried out: compliance and adherence. Compliance includes many variables, but refers mainly to the degree to which patients follow physicians’ instructions (primarily the number of pills taken daily according to the schedule prescribed). For many authors, compliance is a passive behavior on the part of the patient. In contrast, adherence implies active behavior in which a patient’s beliefs with respect to mental illness and drugs are key to the decision of whether to cooperate voluntarily with the treatment regimen. In most psychiatric cases, patients with the freedom to do so choose professionals who have the same ideas as themselves, which should increase likelihood of adhering to the prescriptions. However, in a group of patients in primary health care, suffering from dysthymia and mild depression, it
was found that their beliefs did not predict a greater adherence to treatment, and even that the individuals who did not consider depression to be a biological illness responded best to antidepressants.3

Noncompliance in self-administered treatment is frequent, especially in long-term therapy, when compliance can be as low as 50%. In cases of antibiotic treatment for acute infections, compliance is 75% at the beginning of treatment, but drops to 25% at the end of the regimen.4 In addition, compliance and adherence are frequently overestimated and, consequently, when a patient responds poorly to treatment, these variables are rarely considered responsible for the result.1

Overdosage, underdosage, or taking medication at erratic intervals can bring on adverse effects and make treatment ineffective. Noncompliance is associated with poor clinical evolution. The ideal combination is compliance and successful treatment; this situation should bring about a “virtuous circle” to help maintain long-term treatment. However, there are times when a patient has a high level of compliance, but treatment is only partially successful, in which case the diagnosis and/or treatment must be reevaluated. An issue worthy of further research is the compliance threshold necessary for obtaining an acceptable response to therapy.

Compliance depends on numerous factors. Variables related directly to the medication are tolerance, undesirable side effects (eg, neurological, endocrinological, and anticholinergic), and cost. Patient-related factors include the symptoms of the pathology (especially psychotic symptoms), comorbidity, insight capacity, the patient’s sociocultural background, and his or her beliefs regarding the usefulness of the treatments. A good doctor-patient relationship should be established at the first visit; a general and psychopathological clinical study will provide the means for formulating a diagnosis and treatment, and will allow for the beginning of a psychoeducational process to promote adherence to treatment.

Measurement of compliance is a complex issue. It can be evaluated directly by measuring the presence of the medication or a metabolite in the blood, urine, or saliva, especially when these are present for relatively long periods. Noncompliance can be evaluated indirectly from the patient’s failure to go to appointments, a poor response to treatment (when the usual doses of the medication have been taken), the patient’s report of his or her compliance, a pill count, the presence of expected side effects (eg, dry mouth from taking anticholinergics), and from pharmacy records when the patient regularly purchases the medication at the same place.

Hack and Chow found that compliance with treatment was lower among children than adults, and was lower among psychiatric patients than those with other medical pathologies, leading to the inference that children with psychiatric disorders are at the highest risk for noncompliance.1 Financial factors can also restrict access to proper psychopharmacological treatment (about one-third of patients).4

Information obtained from the patient, other health professionals, and family members can provide subjective data on compliance. In contrast, more precise information can be obtained through electronic monitoring of the prescribed doses by using medication bottles equipped with a device in the lid that informs a computer when the bottle was opened. This can also show the correlation between the number of daily doses and compliance.7 When a single daily dosage is prescribed, compliance is 79%; compliance is 69% for two doses per day, 65% for three doses, and only 51% when four doses per day are prescribed. The differences are significant between one or two versus three or four daily doses, but no significant difference was found between one and two doses, or between three and four daily doses.8

In the various medical or surgical specialties, the health professional’s influence is crucial to improving adherence,9,10 and depends to a large extent on the physician’s communication skills and his or her ability to listen and respond to the patient.11 Other factors that can improve compliance are simplifying the treatment regimen, providing information and descriptions of a medication’s possible side effects, encouraging social support, and developing psychoeducational programs. Patients with higher educational levels are also more likely to comply with treatment.

For the purposes of this paper, noncompliance and lack of adherence will be used interchangeably. The effects of these and of psychosocial factors will be studied in situations of poor response to pharmacological treatments in cases of schizophrenia and affective disorders.

**Schizophrenia**

Although pharmacological treatment of schizophrenia has significantly improved the evolution of this disorder, antipsychotics are still associated with side effects that can undermine a patient’s quality of life, constitute a
social stigma, and result in poor adherence to treatment. Any chronic illness such as schizophrenia involves a high percentage of noncompliance. Although classic neuroleptics have significantly reduced the percentage of relapses, noncompliance can vary from 11% to as high as 80%, making it difficult to evaluate the true effectiveness of drugs as an isolated therapeutic variable in this illness. Noncompliance in schizophrenia can have frequencies similar to that of other chronic illnesses such as epilepsy, diabetes mellitus, and hypertension. Poor adherence is found in approximately two-thirds of rehospitalized patients. Low-adherence patients 2.4 times more likely to be hospitalized (and for longer stays) than a patient who complies with treatment. Of relapse patients, 40% have poor adherence to therapy.

Factors of noncompliance

In their evaluation of possible sociodemographic and illness factors affecting noncompliance, Agarwal et al found that patients who were younger, had illnesses that occur episodically and with a shorter evolution time, had fewer side effects, misunderstood the positive symptoms, and had a more negative subjective attitude toward medication, were more likely not to comply with treatment. The Thought Disorder Subscale of the Brief Psychiatric Rating Scale (BPRS) for psychopathologic evaluation and the Neurological Effects Subscale of the UKU (Udvalg for Kliniske Undersogelser, the Finnish Committee for Clinical Trials) Side Effects Scale predicted a 24% variation rate in adherence. For Linden et al, a positive outlook on the illness, overall evaluation of functioning, and the physician’s impression of the patient’s cooperation with treatment were determining factors in 19% of the adherence variation in a 2-year study of 122 outpatients with schizophrenia. In a group of 77 patients who were hospitalized and treated with clozapine, evaluation at the time of release and 3 months later showed that the therapeutic alliance with the physician, delusions of grandeur, and a positive attitude toward drugs had a significant influence on compliance with treatment. In contrast, acquiring greater knowledge of mental illness and its etiology and prognosis were not factors in adherence. In the initial phase of symptom stabilization, patients with better adherence took higher doses of neuroleptics. In addition, better performance on memory tests, a lower cognitive deficit, and a system of directly supervised medication intake were factors in better compliance with treatment. A good therapeutic relationship seems to be the best predictor of proper adherence; in this respect, the use of clozapine, which requires a period of appointments with blood tests, would bring about a better therapeutic relationship. Comorbidity with drug abuse increases noncompliance. The distinction established between covert noncompliance (resulting from the side effects of neuroleptics) and open noncompliance (caused by the characteristics of the illness) is an interesting issue in the exploration of the various factors that can bring about poor adherence. Patients’ attitudes toward the side effects and potential risks of neuroleptics also have an effect on adherence. Patients taking classic neuroleptics frequently experience extrapyramidal symptoms, which are also unpleasant for family members. They can also cause weight gain (with increased risk of diabetes mellitus and hyperlipemia), which is poorly tolerated, sedation, hyperprolactinemia, prolonging of the Q-T interval, and arrhythmia. Children and adolescents are more susceptible to the extrapyramidal symptoms, weight gain, and hyperprolactinemia caused by neuroleptics, due to a higher density of dopamine D2 receptors in the striatum during this period of development.

While atypical neuroleptics cause fewer side effects than conventional ones (particularly extrapyramidal symptoms) and have a moderately higher adherence rate than classic neuroleptics, the possibility of covert noncompliance should not be underestimated, and efforts to improve adherence should be focused on minimizing the side effects of future neuroleptics. It is noteworthy that depot formulations are being developed for atypical neuroleptics with positive results, as in the case of risperidone. In addition, providing good social support and possibly administering depot neuroleptics may also be interesting treatment strategies. While the advantages of depot over oral neuroleptics have been described in terms of a lower frequency of relapse, these drugs are used relatively infrequently. Valenstein et al found that 18% of 1307 veterans with schizophrenia or schizoaffective disorder used depot neuroleptics, despite the fact that the previous year 49% had been noncompliant with treatment; there were also differences according to where the patients went for appointments and their ethnic group. A direct correlation has been found between higher doses of depot neuroleptics and a lower percentage of annual relapses.
The risk of suspending neuroleptics is higher in patients with positive symptoms or sedation, but the risk is also present in those with few symptoms. The risk factors proposed for poor adherence to antipsychotic treatment are:

- **Neuroleptic-related**: side effects, complexity of prescription, lack of clinical effectiveness, and drugs taken orally.
- **Patient-related**: severity of illness, substance abuse, extreme age (young or elderly), negative beliefs with respect to the medication, and other comorbid diagnoses.
- **Physician-related**: poor doctor-patient/health care team relations, discrepancy between treatments proposed by clinical guidelines and actual clinical practice, lack of a well-structured therapeutic plan, and insufficient information on the illness and its treatment.
- **Environment-related**: negative media information on the illness and/or treatments, lack of family and social support, financial difficulties, and negative attitude of staff or other patients toward the treatment.

In a recent review, Thieda et al concluded that there is a direct correlation between lower compliance with treatment and higher costs in treating schizophrenia.

**Psychosocial aspects**

The psychosocial aspects of schizophrenia are gaining importance daily in both the development and the treatment of the illness. Ritsner et al found that psychosocial factors had the greatest impact on patients’ quality of life (20.9%), followed by the symptoms and associated distress (10.1%), and adverse side effects (3.2%). The findings of Sibitz et al among family members caring for patients are interesting: they show that while men are more difficult to care for, women are less likely to adhere to the treatment regimen and are less compliant with psychosocial treatments. In the development of the illness, in addition to neurobiological factors, social risk variables are being taken more seriously; these include having been born or raised in a city, social isolation, migration, and having experienced significant life events prior to the appearance of the psychosis.

The goals of maintenance treatment are to preserve the clinical improvement made during the acute phase, prevent exacerbation of symptoms, continue reducing psychopathological phenomena, strengthen social and family functions, and finally, improve schizophrenic patients’ quality of life. Long-term pharmacotherapy combined with psychosocial treatments can be more effective than drug therapy alone. Psychosocial treatments are oriented toward preventing relapses, reducing the revolving door syndrome (rehospitalizations), and achieving better response and remission among patients with poor response to drugs. The various psychological treatments used with schizophrenic patients bring about slow, gradual changes. They must be adapted to each individual, and the patient must collaborate in setting objectives in order to ensure greater collaboration and adapt the treatment to the cognitive deficits present.

**Psychosocial therapies**

Among the psychosocial treatments developed in schizophrenia are family psychoeducation, individual treatment (short term to promote compliance and long term to improve coping strategies), cognitive behavior therapy, training in social skills, vocational rehabilitation, and compensatory strategies to modify the environment for better cognitive adaptation.

**Family psychoeducation**

Family psychoeducation provides the family with knowledge about the diagnosis, symptoms, and pathophysiology of schizophrenia. The role of medications is highlighted, as is the evolution of the illness. Family members are considered to be cotherapists, and, through communication techniques, they are given support in finding ways to solve problems and handle crisis situations. A widely studied variable has been the stress the family generates in the context of emotional interaction, called expressed emotion. This concept developed from the observation of patients that had been hospitalized and responded well to medication, but suffered relapses shortly after returning home, despite stable medication levels. Factors in expressed emotion are hostility, critical comments, and excessive emotional involvement on the part of family members. A high level of expressed emotion has been associated with more relapses, while patients with less expressed emotion in their families (more tolerant and less invasive) suffer fewer relapses. Further studies have shown that expressed emotion is a factor in not only schizophrenic relapses, but also appears in other neuropsychiatric illnesses both in the family and in other therapeutic situations. Some families benefit from learning communication techniques to better handle better a psychiatric patient’s evolution.
Schooler et al showed that family involvement—regardless of its intensity—is less important than maintenance treatment with neuroleptics in reducing the risk of relapse. Although no differences were found in the percentage of relapses or rehospitalizations, patients functioned better socially when their families were dealt with individually rather than in groups.

**Individual treatment**

Kemp et al found that individual treatment increased adherence when patients were given four to six cognitive motivation interviews during hospitalization, followed by reinforcement sessions 3, 6, and 12 months after release. After 18 months of follow-up, the group participating in the study was found to have achieved greater functional improvement than the control group who only received general advice and support. The first phase of personal therapy focuses on the relationship between stress and symptoms. The second phase includes training in psychorelaxation and cognitive restructuring techniques for handling stressful situations, and the final stage is geared toward developing vocational and social initiatives in the community. Hogarty et al found that 60% of patients who received personal therapy were well adjusted socially over the long term.

**Cognitive behavior therapy**

Cognitive behavior therapy has been used to treat residual psychotic symptoms. The reinforcement of coping strategies helps the patient to refrain from focusing on, or to ignore, the content of some symptoms. Tarrier et al studied two methods of psychosocial treatment over 3 months. In a 2-year follow-up study, they found that cognitive behavior therapy was not an improvement over counseling in achieving some degree of improvement in schizophrenic symptoms that do not respond to medication. However, the group that only received routine care worsened during the follow-up study.

**Social skills training**

Social skills training is based on the learning theory, which assumes that social behavior can be taught and learned. Certain social behaviors are broken down into their constituent parts, which are modeled and reinforced through feedback. When Smith et al trained a group of hospitalized patients, they found that 70% were coping with the demands of community life 2 weeks after release—an achievement associated with the skills learned before release rather than with the symptoms. In patients stabilized with fluphenazine, Marder et al showed that training in social skills had better results in achieving social adjustment than group therapy during an 18-month follow-up study.

**Vocational rehabilitation**

Vocational rehabilitation evaluates the patient’s skills and potential for working in a competitive job, and seeks to place the patient in a suitable activity with social and economic incentives. Less than 20% of schizophrenic patients hold a competitive job. Bell et al followed patients who were placed in jobs for 6 months; at 5 months they found that those who received a salary worked more hours, had fewer symptoms and rehospitalizations, and participated more in work activities than those who did not receive a salary. The family can be of great assistance in helping the patient find work.

**Affective disorders**

Today, the goals of treatment are to reduce and eliminate the signs and symptoms of depression, recover work and psychosocial functioning, and achieve and maintain complete remission of symptoms. The treatment structure is threefold: an acute phase, followed by a continuation stage and, finally, a maintenance program. Symptoms are most likely to go into remission during the acute phase; thus, every effort must be made to prescribe the antidepressant with the greatest therapeutic value, in optimal doses and with the fewest side effects. If necessary, combination or potentiation strategies are used. After the 6- to 8-week acute stage, 25% to 35% of patients are in remission. A lack of complete remission or discontinuation of treatment increases the risk of relapse and recurrence. It has been emphasized that antidepressants should be taken for approximately 1 year in the dosage that was initially effective, and many patients stay on medication for a longer time to achieve better evolution of the illness. In a naturalistic follow-up study of 62 weeks, after a year of treatment with fluoxetine, 47% of patients’ symptoms
had reappeared, primarily due to psychosocial factors (personal stress, marital difficulties, or a personal decision to discontinue taking the antidepressants). Many patients whose symptoms do not disappear completely are considered resistant to treatment, although, strictly speaking, this is a pseudoresistance that can be caused by insufficient dosage, insufficient treatment time, poor adherence, or clinical evolution.

Depression is an illness that is difficult to treat due to its inherent characteristics, factors that affect the prescription of medication and proper treatment (such as poor adherence and low dosage), comorbidity, and ineffective treatment. A great deal of the enormous personal, social, and economic cost brought on by depression is due to poor social functioning, which has generally been underestimated. While there are differences among the various treatments available to achieve better social functioning, it must be recognized that an improvement in symptoms does not necessarily ensure better functioning in society or at work.

Factors affecting adherence

The arsenal of antidepressants available is much larger today, and the new medications are as efficient as the old tricyclics and monoamine oxidase inhibitors (MAOIs), but with fewer side effects. Although information on the diagnosis and treatment of depression has been publicized in the media, nonadherence to therapy continues to be a major problem.

Little research has been done into the factors associated with noncompliance in treatment for affective disorders, and nonadherence in unipolar and bipolar disorders has been estimated to range from 10% to 60%. Adherence studies using patients’ self-reports show that patients tend to overestimate their compliance, especially older subjects.

A patient’s beliefs about the illness, unpleasant side effects, ineffective treatment, and cultural factors are all variables in noncompliance. Among teenagers prescribed imipramine, it was determined that the oppositional defiant disorder and family dysfunction affected adherence to the medication, rather than the side effects.

The latency period in the early stages of medication and poor tolerance for antidepressants have an effect on compliance. In addition, the physician’s initial communication style significantly influences a patient’s attitude toward the usefulness of antidepressants. Patients’ attitudes and beliefs about the illness and treatment have proven to be as effective in predicting adherence as the unpleasant side effects of the drugs. Treatment with selective serotonin reuptake inhibitors (SSRIs) is abandoned less frequently than therapy with conventional and modern tricyclics, but the difference is small and is based on short-term, controlled, randomized trials. Therefore, in clinical practice, generalizations cannot be made about a greater adherence to SSRIs.

Among SSRIs, fluoxetine had a better pattern of use during a 2-year study when compared with sertraline and paroxetine, which was consistent with clinical guides. One curious finding was the low adherence to nefazodone among a group of Hispanic patients over an acute treatment period of 8 weeks. Despite the fact that 63% responded well to treatment, 42% abandoned the therapy before completion. Using nefazodone with this ethnic group may put the effectiveness of the treatment at risk, especially considering that there were no differences in unpleasant side effects.

Studies on therapeutic response predictors in depression have had varying results. Gender does not seem to be a good predictor of evolution either in a fluoxetine maintenance treatment program or in a lithium potentiation treatment in tricyclic-resistant patients; in contrast, men respond better to tricyclics, and women to MAOIs and SSRIs. Although Quitkin et al found no gender differences in the use of tricyclics or fluoxetine, women responded better to MAOIs, but without clinical relevance. Age is not an efficient evolution predictor either; however, in a 4.5-year study among patients who required hospitalization for depression, Tuma observed that those over 65 had a worse prognosis than younger patients, particularly due to health problems, dementia, and death.

Since psychosocial functioning improves more slowly than depressive symptoms, the maintenance phase of treatment is particularly important. However, it was found that the most significant progress in psychosocial variables occurred during the acute phase of antidepressive treatment. Patients with more severe problems with everyday activities and who lack a good social support system have a worse prognosis. In turn, those from higher social and economic groups have better evolution, while patients from lower income groups have more persistent depressive symptoms.
Sirey et al evaluated adherence to acute treatment and found that the most compliant patients were (i) less likely to view depression as a stigma; (ii) more severe cases; (iii) over 60 years of age; and (iv) those without personality disorders. With respect to long-term adherence, in a group of patients who responded well to fluoxetine at 8 weeks, a follow-up study at 26 weeks found that those who had abandoned treatment early (before 2 months) suffered more social maladjustment than those who completed the study. Likewise, subjects who finished the study and those who abandoned early had deprivations of longer duration than subjects who left treatment later.

The type of work and how an individual handles his or her working activity have been important issues in depression research. The GAZEL study evaluated a cohort of 10,519 employees of the French national electricity and gas company over 3 years. This study showed that demanding work and poor social support were good predictors for the appearance of depressive symptoms regardless of the subject’s personality.

Among the steps and programs developed to improve adherence to antidepressive treatment, one of the most important is the role of pharmacists as “cotherapists” to reinforce the patient’s attitude towards medication. Advice over the telephone and monitoring of medication, especially at the outset of treatment in primary care, have also proven useful, as have informational mailings, either exclusively or in combination with telephone advice. An interactive voice response system for improving compliance with antidepressant treatment is currently being developed with promising results.

Depressed patients who are treated by psychiatrists have better adherence rates and take the new antidepressants for longer periods and at more appropriate dosages than those receiving treatment from primary care physicians. Since more depression patients are treated in the primary care system and many have persistent symptoms, psychoeducation programs have been designed and the frequency of visits from psychiatrists on the primary care staff have increased. This has resulted in more adherence to therapeutic doses and fewer depressive symptoms than among patients receiving conventional treatment. Furthermore, patients who are allowed to set their own schedule for taking antidepressants are more likely to comply with the program, although after 12 weeks adherence drops in any kind of medication administration program.

**Bipolar disorder**

Bipolar disorder is a chronic illness requiring lifelong prophylactic treatment to reduce relapse and recurrence, and ideally to keep symptoms in remission. Most studies on adherence to bipolar pharmacological treatment have been carried out with outpatients taking lithium; noncompliance figures range from 18% to 52%. In a 6-year naturalistic study, Schumann et al found that overall medication discontinuance rates were 54%; it is noteworthy that 43% of those who went off the medication did so within the first 6 months of treatment. In a group of 101 patients hospitalized for acute mania, 64% had been noncompliant with treatment the month prior to hospitalization. A prospective evaluation at 1 year of patients hospitalized for acute mania or a mixed episode revealed a 51% noncompliance rate with mood stabilizers. Levantes et al found an overall adherence rate of 74% in lithium treatment after 6 months of observation; slow-release lithium carbonate (400 mg) was better tolerated and allowed for better adherence than standard tablets (250 mg). Schou, a renowned figure in lithium use in psychiatry, has insisted that noncompliance is the most frequent cause for recurrence during prophylactic treatment. He has also indicated that this treatment must be used in conjunction with procedures that reinforce compliance through information, support, and supervision. Instruments such as the Lithium Attitudes Questionnaire, developed to evaluate patients’ attitudes towards lithium, have shown that negative attitudes are associated with higher noncompliance rates.

In ascertaining why patients discontinued their lithium treatment, Pope and Scott found that the most commonly endorsed items were “bothered by the idea of a chronic illness,” “bothered by the idea that moods were controlled by medication,” and “felt depressed.” In contrast, clinicians believed that patients stopped taking lithium either because of “feeling down” or because of “feeling better,” assuming that if they felt well they no longer needed medication. Rather than greater knowledge about lithium, what is needed is to modify patients’ attitudes to improve adherence. Being female, older, living with a partner, having a higher educational level, and perceiving the benefits and obstacles of lithium treatment were all factors in better compliance. Studies show that bipolar patients with substance use disorder have better compliance when
taking valproate than lithium, and that poor adherence to lithium is the result of side effects. One of the main side effects of mood stabilizers is weight gain, which can be a major obstacle to maintaining prophylactic treatment. Topiramate is an alternative to lithium and valproate that causes a drop in weight and body mass index. Weight monitoring and education on this issue must not be overlooked in order to promote better adherence.

Conclusion

Today’s maintenance treatments of various mental illnesses are very challenging to the clinician because his or her responsibility in a patient’s adherence to treatment goes beyond simply a correct diagnosis and choice of medication. A good doctor-patient relationship with an emphasis on communication is the best way to ensure compliance with therapy. Given the high noncompliance rates, this is an issue that must be dealt with in each clinical appointment. Family participation, patient psychoeducation, and reinforcement programs with telephone calls and information mailings all help improve adherence. The concept of therapeutic dosage should be paramount from the onset, ie, the smallest effective dosage, taken the fewest times per day, with the fewest side effects, and for the length of time needed to obtain remission of symptoms and the best quality of life. Despite physicians’ best efforts, patient’s decision is the main reason for abandoning treatment. Attitudes and behaviors toward the illness and treatment are better adherence predictors than are drugs’ side effects. Clinical guidelines are a major help in improving treatments, but clinicians do not always follow these guidelines.

REFERENCES

1. Fleischhacker WW, Meise U, Gürter V, Kurz M. Compliance with antipsychotic drug treatment: influence of side effects. Acta Psychiatr Scand. 1994;89(suppl 382):115-155.
2. Mann NC. Improving Adherence Behaviour with Treatment Regimens. Behavioural Science Learning Modules. Geneva, Switzerland: Division of Mental Health, World Health Organization; 1993.
3. Sullivan MD, Katon WJ, Russo JE, et al. Patient beliefs predict response to paroxetine among primary care patients with dysthymia and minor depression. J Am Board Fam Pract. 2003;16:22-31.
4. Stephenson BJ, Rowe BH, Haynes B, Macharia WM, Leon G. Is this patient taking the treatment as prescribed? JAMA. 1993;269:2779-2781.
5. Hack S, Chow B. Pediatric psychotropic medication compliance: a literature review and research-based suggestions for improving treatment compliance. J Child Adolesc Psychopharmacol. 2001;11:59-67.
6. West JC, Pingitore D, Zarin DA. Characteristics of psychiatric patients for whom financial considerations affect optimal treatment provision. Psychiatr Serv. 2002;53:1626-1629.
7. Cramer JA, Mattson RH, Prevey ML, Scheyer RD, Ouellette VL. How often is medication taken as prescribed? JAMA. 1989;261:3273-3277.
8. Claxton AJ, Cramer J, Pierce C. A systematic review of the associations between dose regimens and medication compliance. Clin Ther. 2001;23:1296-1310.
9. Zrinyi M. The influence of staff-patient interactions on adherence behaviours. EDTNA ERA J. 2001;26:13-16.
10. Pumilia CV. Psychological impact of the physician-patient relationship on compliance: a case study and clinical strategies. Prog Transplant. 2002;12:10-16.
11. DiBartola LM. Listening to patients and responding with care: a model for teaching communication skills. Jt Comm J Qual Improv. 2001;27:315-323.
12. Misrahi D, Llorca PM, Lancon C, Bayle FJ. Compliance in schizophrenia: predictive factors, therapeutic considerations and research implications. Encephale. 2002;28:266-272.
13. Wright EC. Non-compliance or how many aunts has Matilda? Lancet. 1993;342:909-913.
14. Lacro JP, Dunn LB, Dolder CR, Leckband SG, Jeste DV. Prevalence of and risk factors for medication nonadherence in patients with schizophrenia: a comprehensive review of recent literature. J Clin Psychiatry. 2002;63:892-909.
15. Fenton WS, Blyer CR, Heinssen RK. Determinants of medication compliance in schizophrenia: empirical and clinical findings. Schizophr Bull. 1997;23:637-651.
16. Valenstein M, Copeland LA, Blow FC, et al. Pharmacy data identify poorly adherent patients with schizophrenia at increased risk for admission. Med Care. 2002;40:630-639.
17. Agarwal MR, Sharma VK, Kishore Kumar KV, Lowe D. Non-compliance with treatment in patients suffering from schizophrenia: a study to evaluate possible contributing factors. Int J Soc Psychiatry. 1998;44:92-106.
18. Garcia-Cabeza I, Sanchez Diaz EI, Sanz Amador M, Gutierrez-Rodriguez M, Gonzalez de Chavez M. Factors related to treatment adherence in schizophrenic patients. Actas Esp Psiquiatr. 1999;27:211-216.
19. Linden M, Godemann F, Gaebel W, et al. A prospective study of factors influencing adherence to a continuous neuroleptic treatment program in schizophrenia patients during 2 years. Schizophr Bull. 2001;27:585-596.
20. Holzinger A, Loffler W, Muller P, Priebe S, Angermeyer MC. Subjective illness theory and antipsychotic medication compliance by patients with schizophrenia. J Nerv Ment Dis. 2002;190:597-603.
21. Donohoe G, Owens N, O'Donnell C, et al. Predictors of compliance with neuroleptic medication among inpatients with schizophrenia: a discriminant function analysis. Eur Psychiatry. 2001;16:293-298.
22. Patterson TL, Lacro J, McKibbin CL, Moscona S, Hugs T, Jeste DV. Medication management ability assessment: results from a performance-based measure in older outpatients with schizophrenia. J Clin Psychopharmacol. 2002;22:11-19.
23. Grunebaum MF, Weiden PJ, Olsson M. Medication supervision and adherence of persons with psychotic disorders in residential treatment settings: a pilot study. J Clin Psychiatry. 2001;62:594-599.
24. Weiss KA, Smith TE, Hull JW, Piper AC, Huppert JD. Predictors of risk of nonadherence in outpatients with schizophrenia and other psychotic disorders. Schizophr Bull. 2002;28:341-349.
25. Marder SR. Facilitating compliance with antipsychotic medication. J Clin Psychiatry. 1998;59(suppl 3):21-25.
Poor response to treatment: beyond medication - Carvajal

Respuesta insuficiente al tratamiento: más allá de los medicamentos

En psiquiatría uno de los factores que afecta la mala respuesta a los tratamientos farmacológicos es la adherencia. El incumplimiento en los tratamientos de mantenimiento de enfermedades crónicas como la esquizofrenia y los trastornos afectivos puede superar el 50%. En la mala adherencia hay factores dependientes del fármaco (tolerancia, complejidad de la indicación, efectos indeseables, costo), del paciente (síntomas de la enfermedad, comorbilidad, capacidad de insight, sistema de creencias y ambiente sociocultural) y del médico (estilo de comunicación y psicoeducación). Los tratamientos psicosociales deben estar incorporados junto con los fármacos en la fase de mantención para ayudar a una mejor adherencia al tratamiento biológico y conseguir, a través del manejo de variables psicológicas, un mejor funcionamiento social, laboral y familiar. En este artículo se revisan los conceptos de adherencia e incumplimiento, y su impacto en los tratamientos de mantención, como también el efecto que tiene el manejo de los factores psicosociales en el tratamiento psiquiátrico.

Réponse insuffisante au traitement : au-delà du médicament

En psychiatrie, l’un des principaux facteurs contribuant à la réponse insuffisante au traitement pharmacologique est le manque d’adhésion du patient. La non-observance du traitement d’entretien pour les maladies chroniques comme la schizophrénie et les troubles affectifs peut dépasser 50 %. La mauvaise adhésion thérapeutique peut être due à des facteurs liés au médicament (tolérance, complexité de la prescripción, effets secondaires, ou coût), à des variables liées au patient (symptômes de la maladie, comorbidity, intution, convictions, ou environnement socioculturel), et à des facteurs liés au médecin (communication ou mode psychoéducatif). Les traitements psychosociaux doivent être utilisés conjointement avec les médicaments pendant la période d’entretien pour améliorer l’adhésion au traitement et pour obtenir – grâce à la gestion des variables psychosociales – un meilleur fonctionnement social, professionnel et familial. Cet article décrit les concepts d’adhésion et de non-observance et leur impact sur la poursuite des traitements, ainsi que l’effet de la gestion des facteurs psychosociaux dans les traitements psychiatriques.

26. Owen RR, Fischer EP, Booth BM, Cuffel BJ. Medication noncompliance and substance abuse among patients with schizophrenia. Psychiatr Serv. 1996;47:853-858.
27. Perkins DO. Adherence to antipsychotic medications. J Clin Psychiatry. 1999;60(suppl 21):25-30.
28. Buis W. Patient’s opinions concerning side effects of depot neuroleptics. Am J Psychiatry. 1992;149:844-845.
29. Lewis R. Typical and atypical antipsychotics in adolescent schizophrenia: efficacy, tolerability, and differential sensitivity to extrapyramidal symptoms. Can J Psychiatry. 1998;43:596-604.
30. Csernansky JG, Schuchart EK. Relapse and rehospitalisation rates in patients with schizophrenia: effects of second generation antipsychotics. CNS Drugs. 2002;16:473-484.
31. Dolder CR, Lacro JP, Dunn LB, Jeste DV. Antipsychotic medication adherence: is there a difference between typical and atypical agents? Am J Psychiatry. 2002;159:103-108.
32. Kane JM, Eerdekens M, Lindenmayer JP, Keith SJ, Lesem M, Karcher K. Long-acting injectable risperidone: efficacy and safety of the first long-acting atypical antipsychotic. Am J Psychiatry. 2003;160:1125-1132.
33. Hogarty GE, Schooler NR, Ulrich R, et al. Fluphenazine and social therapy in the aftercare of schizophrenic patients: relapse analyses of a 2-year controlled study of fluphenazine decanoate and fluphenazine hydrochloride. Arch Gen Psychiatry. 1979;36:1283-1294.
34. Valenstein M, Copeland LA, Owen R, Blow FC, Visnic S. Adherence assessments and the use of depot antipsychotics in patients with schizophrenia. J Clin Psychiatry. 2001;62:545-551.
35. Kane JM, Davis JM, Schooler NR, Marder SR, Brauzer B, Casey DE. A one-year comparison of four dosages of haloperidol decanoate. Schizophr Res. 1993;9:239-240.
36. Hofer A, Kemmler G, Eder U, Honeder M, Hummer M, Fleischhacker WW. Attitudes toward antipsychotics among outpatient clinic attendees with schizophrenia. J Clin Psychiatry. 2002;63:49-53.
37. Oehl M, Hummer M, Fleischhacker WW. Compliance with antipsychotic treatment. Acta Psychiatr Scand. 2000;102(suppl):83-86.
38. Thieda P, Beard S, Richter A, Kane J. An economic review of compliance with medication therapy in the treatment of schizophrenia. Psychiatr Serv. 2003;54:508-516.
39. Ritsner M, Ponizovsky A, Endicott J, et al. The impact of side-effects of antipsychotic agents on life satisfaction of schizophrenia patients: a naturalistic study. Eur Neuropsychopharmacol. 2002;12:31-38.
40. Sibitz I, Amering M, Kramer B, Griengl H, Katschnig H. The course of illness and problems of schizophrenic women and men from the relatives’ perspective. Psychiatr Prax. 2002;29:148-153.
41. Bramon E, Murray RM. A plausible model of schizophrenia must incorporate psychological and social, as well as neurodevelopmental risk factors. Dialogues Clin Neurosci. 2001;3:243-256.
42. Valenzuela Collazos M, Ortega Soto HA, Rascon Gasca ML, Gomez Caudillo L. Evaluation of the combination of psychosocial and pharmacological treatment in schizophrenic patients. *Actas Esp Psiquiatr.* 2002;30:358-369.

43. Borrowclough C, Haddock G, Tarrier N, et al. Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. *Am J Psychiatry.* 2001;158:1706-1713.

44. Bellack AS. Psychosocial treatment in schizophrenia. *Dialogues Clin Neurosci.* 2001;3:136-137.

45. Brown GW, Rutter M. The measurement of family activities and relationships: a methodological study. *Hum Relations.* 1966(2(suppl)):10-15.

46. Vaughan C, Leff J. The influence of family and social factors on the course of psychiatric illness. *Br J Psychiatry.* 1976;129:125-137.

47. Kavanagh DJ. Recent developments in expressed emotion and schizophrenia. *Br J Psychiatry.* 1992;160:601-620.

48. Cortes-Padilla MT, Rascon-Gasca ML. Psychosocial factors associated with hospital readmission of patients with organic psychoses. *Salud Publica Mex.* 2001;43:526.

49. Snyder KS, Wallace CJ, Moe K, et al. Expressed emotion by residential care operators and the residents’ symptoms and quality of life. *Hosp Commun Psychia.* 1994;45:1141-1143.

50. Bellack AS, Haas GL, Schooler NR, Flory JD. Effects of behavioural family management on family communication and patient outcomes in schizophrenia. *Br J Psychiatry.* 2000;177:434-439.

51. Schooler NR, Keith SJ, Severe JB, et al. Relapse and rehospitalization during maintenance treatment of schizophrenia: the effects of dose reduction and family treatment. *Arch Gen Psychiatry.* 1997;154:453-463.

52. Montero I, Asencio A, Hernández I, et al. Two strategies for family intervention in schizophrenia: a randomized trial in a Mediterranean environment. *Schizophren Bull.* 2001;27:661-670.

53. Kemp R, Kirov G, Evertt B, Hayward P, David A. Randomised controlled trial of compliance therapy. 18-month follow-up. *Br J Psychiatry.* 1998;172:413-419.

54. Hogarty GE, Greenwald D, Ulrich RF, et al. Three-year trials of personal therapy among schizophrenic patients living with or independent of family: II. Effects on adjustment of patients. *Am J Psychiatry.* 1997;154:1514-1524.

55. Tarrier N, Kinney C, McCarthy E, et al. Two-year follow-up of cognitive-behavioral therapy and supportive counseling in the treatment of persistent symptoms in chronic schizophrenia. *J Consult Clin Psych.* 2000;68:917-922.

56. Smith TE, Hull JW, Mackain SJ, et al. Training hospitalized patients with schizophrenia in community reintegration skills. *Psychiatr Serv.* 1996;47:1099-1103.

57. Marder SR, Wirshing WC, Mintz J, et al. Two-year outcome of social skills training and group psychotherapy for outpatients with schizophrenia. *Am J Psychiatry.* 1996;153:1585-1592.

58. Lehman AF. Vocational rehabilitation in schizophrenia. *Schizophren Bull.* 1995;21:645-666.

59. Bell MD, Lysaker PH, Milstein RM. Clinical benefits of paid work activity in schizophrenia. *Schizophren Bull.* 1996;22:51-67.

60. Gaal E, van Weeghel J, van Campen M, Linszen D. The trainee project: family-aided vocational rehabilitation of young people with schizophrenia. *Psychiatr Rehabil J.* 2002;26:101-105.

61. Paykel ES. Achieving gains beyond response. *Acta Psychiatr Scand.* 2002;415(suppl):12-17.

62. Thase ME. The clinical, psychosocial, and pharmacoeconomic ramifications of remission. *Am J Manag Care.* 2001;7(suppl 11):S377-S385.

63. Kennedy S, McIntyre R, Fallu A, Lam R. Pharmacotherapy to sustain the fully remitted state. *Am J Psychiatry.* 2000;61:suppl 2:6-9.

64. Fawcett J, Barkin RL. Efficacy issues with antidepressants. *J Clin Psychiatry.* 1997;58(suppl 6):32-39.

65. Lingman R, Scott J. Treatment non-adherence in affective disorders. *Acta Psychiatr Scand.* 2002;105:161-163.

66. Scott J. Using health belief models to understand the efficacy-effec- tiveness gap for mood stabilizer treatments. *Neuropsychobiology.* 2002;46(suppl 1):13-15.

67. Hirschfeld RM, Montgomery SA, Keller MB, et al. Social functioning in depression: a review. *J Clin Psychiatry.* 2000;61:268-275.
92. Bielski RJ, Friedel RO. Prediction of triyclic antidepressant response: a critical review. Arch Gen Psychiatry. 1976;33:1479-1489.
93. Ostler K, Thompson C, Kinmonth A-LK, et al. Influence of socio-economic deprivation on the prevalence and outcome of depression in primary care: the Hampshire Depression Project. Br J Psychiatry. 2001;178:12-17.
94. Sirey JA, Bruce ML, Alexopoulos GS, Perlick DA, Friedman SJ, Meyers BS. Stigma as a barrier to recovery: perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. Psychiatr Serv. 2001;52:1615-1620.
95. Sonawalla SB, Farabaugh AH, Leslie VM, Pava JA, Matthews JD, Fava M. Early drop-outs, late drop-outs and completers: differences in the continuation phase of a clinical trial. Prog Neuropsychopharmacol Biol Psychiatry. 2002;26:1415-1419.
96. Paterniti S, Niedhammer I, Lang T, Consoli SM. Psychosocial factors at work, personality traits and depressive symptoms. Br J Psychiatry. 2002;181:111-117.
97. Brook O, van Hout H, Nieuwenhuyse H, Heerdink E. Impact of coaching by community pharmacists on drug attitude of depressive primary care patients and acceptability to patients; a randomized controlled trial. Eur Neuropsychopharmacol. 2003;13:1-9.
98. Bultman DC, Svarstad BL. Effects of pharmacist monitoring on patient satisfaction with antidepressant medication therapy. J Am Pharm Assoc (Wash). 2002;42:36-43.
99. Tutty S, Simon G, Ludman E. Telephone counseling as an adjunct to antidepressant treatment in the primary care system. A pilot study. Eff Clin Pract. 2000;3:170-178.
100. Meresman JF, Hunkeler EM, Hargreaves WA, et al. A case report: implementing a nurse telecare program for treating depression in primary care. Psychiatry Q. 2003;74:61-73.
101. Dietrich AJ, Oxman TE, Burns MR, Winchell CW, Chin T. Application of a depression management office system in community practice: a demonstration. J Am Board Fam Pract. 2003;16:107-114.
102. Hoffman L, Enders J, Luo J, Segal R, Pippins J, Kimberlin C. Impact of an antidepressant management program on medication adherence. Am J Manag Care. 2003;9:70-80.
103. Aubert RE, Fulop G, Xia F, Thiel M, Maldonato D, Woo C. Evaluation of a depression health management program to improve outcomes in first or recurrent episode depression. Am J Manag Care. 2003;9:374-380.
104. Stuart GW, Laraia MT, Ornstein SM, Nietert PJ. An interactive voice response system to enhance antidepressant medication compliance. Top Health Inf Manage. 2003;24:15-20.
105. Simon GE, von Korff M, Wagner EH, Barlow W. Patterns of antidepressant use in community practice. Gen Hosp Psychiatry. 1993;15:399-408.
106. Katon W, von Korff M, Lin E, et al. Stepped collaborative care for primary care patients with persistent symptoms of depression. Arch Gen Psychiatry. 1999;56:1109-1115.
107. Myers ED, Branthwaite A. Out-patient compliance with antidepressant medication. Br J Psychiatry. 1992;160:83-86.
108. Licht RW, Vestergaard P, Rasmussen NA, Jepsen K, Brodersen A, Hansen PE. A lithium clinic for bipolar patients: 2-year outcome of the first 148 patients. Acta Psychiatr Scand. 2001;104:387-390.
109. Svarstad BL, Shireman TI, Sweeney JK. Using drug claims data to access the relationship of medication adherence with hospitalization and costs. Psychiatr Serv. 2001;52:805-811.
110. Scott J, Pope M. Nonadherence with mood stabilizers: prevalence and predictors. J Clin Psychiatry. 2002;63:384-390.
111. Schumann C, Lenz G, Berghofer A, Muller-Oerlinghausen B. Non-adherence with long-term prophylaxis: a 6-year naturalistic follow-up study of affectively ill patients. Psychiatry Res. 1999;89:247-257.
112. Keck PE Jr, McElroy SL, Strakowski SM, et al. Factors associated with pharmacologic noncompliance in patients with mania. J Clin Psychiatry. 1996;57:292-297.
113. Keck PE Jr, McElroy SL, Strakowski SM, Bourne ML, West SA. Compliance with maintenance treatment in bipolar disorder. Psychopharmacol Bull. 1997;33:87-91.
114. Levantes B, Senimon F, Bayle FJ. Compliance with and tolerance of sustained-release lithium carbonate. Encephale. 1999;25:152-157.
115. Schou M. The combat of non-compliance during prophylactic lithium treatment. Acta Psychiatr Scand. 1997;95:361-363.
116. Pope M, Scott J. Do clinicians understand why individuals stop taking lithium? J Affect Disord. 2003;74:287-291.
117. Dharmendra MS, Eagles JM. Factors associated with patients’ knowledge and attitudes towards treatment with lithium. J Affect Disorder. 2003;75:29-33.
118. Bonin JP. Psychosocial determinants of lithium compliance in patients with bipolar disorder. Can J Nurs Res. 1999;31:25-40.
119. Ozerdem A, Tunca Z, Kaya N. The relatively good prognosis of bipolar disorders in a Turkish bipolar clinic. J Affect Disorder. 2001;64:27-34.
120. Weiss RD, Greenfield SF, Najavits LM, et al. Medication compliance among patients with bipolar disorder and substance use disorder. J Clin Psychiatry. 1998;59:172-174.
121. Chengappa KN, Chalasani L, Brar JS, Parepally H, Houck P, Levine J. Changes in body weight and body mass index among psychiatric patients receiving lithium, valproate, or topiramate: an open-label, nonrandomized chart review. Clin Ther. 2002;24:1576-1584.
122. Cuffel BJ, Azocar F, Tomlin M, Greenfield SF, Busch AB, Crogan TW. Remission, residual symptoms, and nonresponse in the usual treatment of major depression in managed clinical practice. J Clin Psychiatry. 2003;64:397-402.
123. Sood N, Treglia M, Obenchain RL, Dulsie B, Melfi CA, Crogan TW. Determinants of antidepressant treatment outcome. Am J Manag Care. 2000;6:1327-1336.
124. Lim PZ, Tunis SL, Edell WS, Jensik SE, Tohen M. Medication prescribing patterns with bipolar I disorder in hospital settings: adherence to published practice guidelines. Bipolar Disord. 2001;3:165-173.