

Adherence to Therapy with Oral Anticoagulants and Associated Factors: an Integrative Review

REVIEW

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Abstract

Background: To investigate the adherence and the factors in the literature associated with the use of oral anticoagulants.

Method: This is an integrative review conducted in the databases: COCHRANE, Scientific Electronic Library Online, Latin American and Caribbean Sciences Health, Cumulative Index to Nursing and Allied Health Literature, National Library of Medicine and National Institutes of Health and Web of Science in June 2015.

Results: The sample consisted of 16 publications of which 4 (25%) were found in database LILACS, 4 (25%) in the CINAHL, 5 (31.2%) in the WEB OF SCIENCE and 3 (18.8%) in PUBMED. Most of the studies showed poor adherence to oral anticoagulant therapy and clinical, psychological, socioeconomic factors as influencers in the adherence.

Conclusions: Joining the treatment is shown to be essential for proper control of any illness, a phenomenon that is evident by the active participation of the patient in the therapeutic plan.

Introduction

With the high life expectancy and changes in the epidemiological profile, there was an increased use of oral anticoagulant therapy (OAT) in various situations in clinical practice due to its proven efficacy and safety in the prevention and treatment of thromboembolic events. On the other hand, there is great variability in individual res-

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Keywords

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ponses to OAT that may trigger unwanted effects, such as bleeding and thrombus. [1]

Therapy with the OAT is often indicated in situations such as acute myocardial infarction, atrial fibrillation, deep vein thrombosis, prosthetic heart valves, stroke, among other special situations. The Coumadin derivate drugs act on the physiological process of hemostasis system, reducing the activity of vitamin K and thereby slowing clot formation time. [2]

In this perspective, the use of these drugs requires a medical control and rigorous service by health professionals, requiring that patients using the therapy undergo periodic laboratory tests to assess the proper dosage. The laboratory monitoring is performed by frequent blood sampling to obtain the international normalized ratio (INR), ranging from 2 to 3 or according to directions for anticoagulation. [1]

Studies show that the OAT therapeutic action can be influenced by several situations, such as drug interactions, food, genetic factors, vitamin K intake and the presence of comorbidities, thus interfering with the drug stability. This care can cause changes in the lifestyle of the patients since there are changes in eating habits and the peculiarities inherent to the therapy, as the habit of daily intake of the drug and the need for monitoring of anticoagulation range in health services. [3]

Given that this monitoring occurs for an extended period, it is essential the patient adherence to the therapeutic process prevent the emergence of possible complications and ensure a safe treatment, being an important factor to be considered together with the associated factors that can interfere with this process.[3]

Facing all these care demands that the treatment with OAT generates, there is the role of the health professionals, especially the nurses, being an extremely important subject in promoting OAT therapy guidelines, essential for the adherence of these patients and therefore their quality of life.

Thus, this study aimed to verify the adherence to therapy with OAT and associated factors in the literature.

Methods

This study is an integrative review. For the implementation of this integrative review, there was the drafting of a protocol where the following steps were followed: definition of research question and objective; establishment of criteria for inclusion and exclusion of articles (sample selection); databases, descriptors used in the search, descriptors crossing, strategy for data collection of articles and critical evaluation of studies.[4]

The elaboration of the research question was based on PVO strategy (P- problem; V- variables; O- outcome). Thus, the question prepared for the study was: "What is the production in the literature on patient adherence to therapy with oral anticoagulants and associated factors?"

For the survey of articles in the literature, a search was held in June 2015, using the databases: COCHRANE, Scientific Electronic Library Online (SCIELO), Latin American and Caribbean Health Sciences (LILACS), Cumulative Index to Nursing and Allied Health Literature (CINAHL), National Library of Medicine and National Institutes of Health (PUBMED) and Web of Science.

The following descriptors were defined: medication adherence and anticoagulants. They were grouped in an uncontrolled way and using Boolean operator "AND". During the survey of the publications, uncontrolled descriptors of MeSH vocabulary were used - Medication Adherence and anticoagulants.

After inserting the search expressions in the databases, the search limits were: publications available in full in the above databases and answering the guiding question. There was not date restriction of publications. Studies of literature reviews were excluded.

The study selection procedure was performed by two researchers independently, based on the research protocol, the analysis of the titles and abstracts of the publications. Later, there was a consensus of the articles that would be read in full from the previously selected studies. **(Figure 1)**

The results were presented descriptively in two steps. The first step was the data description of the publications identification (database, study type, year of publication, the level of scientific evidence according to Joanna Briggs Institute and country of the study). In the second step, adherence and factors associated with this therapy adherence in the OAT were described. Therefore, the results were grouped into two categories: adherence medication therapy with OAT and factors related to adherence to the OAT.

Results

Out of the six surveyed bases, Scielo and Cochrane did not add any studies to the sample. The sample of this review totaled of 16 articles **(Table 1)**, of which 4 (25%) were found in LILACS database, 4 (25%) in the CINAHL, 5 (31.2%) in WEB OF SCIENCE and 3 (18.8%) in PubMed.

Of the studies analyzed, 10 (62.50%) were published in the period from 2011 to 2015 and 6 (37.50%) from 2007 to 2010. As for the origin of the study, 6 (37.50%) were from the United States, 4 (25.00%) from Brazil, 1 (6.25%) from the UK, 6.25%), 1 from

Figure 1: Flowchart of the methodological steps of the integrative review. Natal, 2015.

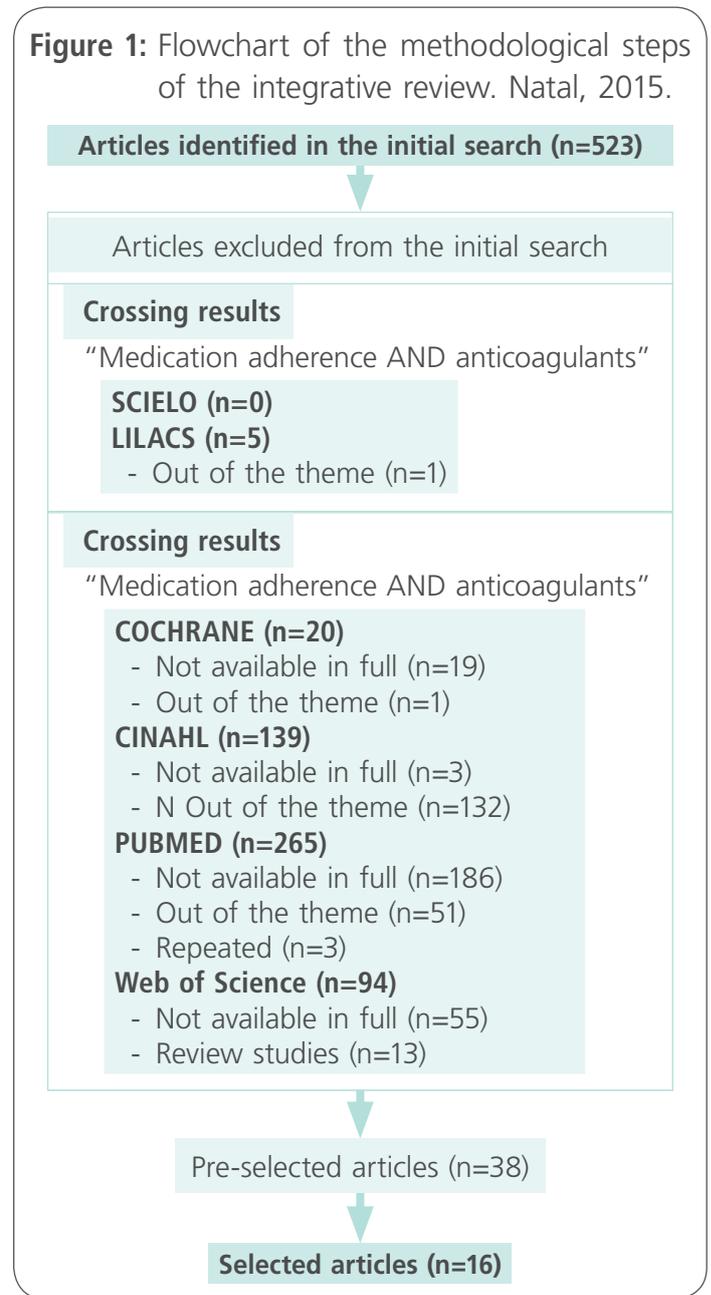


Table 1. Characterization of the articles found. Natal/RN, Brazil, in 2015.

Database [Reference]	Type of study	Year of Publication	Level of Evidence*	Country of the study
PUBMED [5]	Prospective cohort study	2007	2b	USA
PUBMED [6]	Prospective cohort study	2010	2b	USA
Web of Science [7]	Cross-sectional study	2011	4b	The Republic of Korea
Web of Science [8]	Case-control study	2014	4b	Italy
Web of Science [9]	Prospective observational cohort study	2015	2b	Germany
CINAHL [10]	Cohort study	2014	2b	USA
CINAHL [11]	Prospective cohort study	2010	2b	USA
CINAHL [12]	Prospective cohort study	2011	2b	USA

Database [Reference]	Type of study	Year of Publication	Level of Evidence*	Country of the study
Web of Science [13]	Cross-sectional study	2014	4b	Singapur
LILACS [14]	Cross-sectional study	2011	4b	Brazil
LILACS [15]	Cross-sectional study	2009	4b	Brazil
LILACS [16]	Methodological study	2010	4c	Brazil
LILACS [17]	Retrospective cohort study	2014	2b	Brazil
PUBMED [18]	Case-control study	2008	4b	USA
Web of Science [19]	Cohort study	2015	2b	United Kingdom
CINAHL [20]	Cross-sectional study	2011	4b	Finland

*: Level of Evidence: Joanna Briggs Institute.

Singapore, 1 (6.25%) from Germany, 1 (6.25%) from Italy, 1 (6.25%) from the Republic of Korea and 1 (6.25%) from Finland.

The articles were published in 14 different journals, 12 (75.00%) International journals and 4 (25,00%) national journals. Regarding the language of the studies, 13 (81.20%) were published in English and 3 (18.80%) in Portuguese.

Table 2. Adherence to OAT according to the studies of the integrative review. Natal/RN, Brazil, in 2015.

Adherence to treatment	Estudos	n	%
Low	5, 6, 7, 8, 9, 10, 11, 12, 13	9	56.25
Mean	14, 15	2	12.50
High	16, 17, 18, 19, 20	5	31.25

Table 2. Factors associated with adherence of OAT according to the integrative review. Natal/RN, Brazil, in 2015.

Associated factors	Studies	n	%
<i>Clinical factors</i> (Long period of anticoagulation and outpatient follow-up, complications)	5, 6, 8, 11, 13, 14, 15, 17	8	50.00
<i>Psychosocial factors</i> (Change of health, knowledge of the importance of therapy, lack of encouragement by health professionals).	6, 7, 11	3	18.75
<i>Socioeconomic factors</i> (Level of education, cost of medication and transportation, age).	6, 11, 14, 15, 18	5	31.25

As for the level of evidence, most of the studies are classified according to the Joanna Briggs Institute as evidence level 2b (50%), 4b (43.4%) and 4c (6.35%). Low adherence was observed in most studies, 9 (56.25%). (**Table 2**)

To measure this adherence, the studies used some resources, such as 1 drug count (6.25%), 1 monitoring by phone (6.25%), 2 self-reported (12.50%), 3 Morisky Adherence Scale (18.75%), 4 INR dosage (25.00%) and 5 electronic monitoring (31.25%). (**Table 3**)

Discussions

Although in recent years, the benefit and safety of the use of therapy with ACO have been established for the prophylaxis and treatment of thromboembolic events, its adherence in clinical practice has not been significant [14], as observed in this study, remaining a major challenge.

Patient adherence to therapy consists of a collaborative process of an individual against the proposed treatment, corresponding to the guidelines recommended by health professionals, facilitating the acceptance and integration of a given treatment regimen. [21] According to the World Health Organization, the nonadherence to long-term therapies in developed countries is around 50%, and this percentage in developing countries is higher. [22]

A study conducted at the state hospital in Ribeirão Preto assessing the adherence to treatment

of OAT in patients treated at a specialized anticoagulation outpatient, two months after hospital discharge, through an instrument called measure of adherence to treatment (MAT), all participants classified as compliant [3], in contrast with the results of this review.

It is important to note that a large number of drugs and daily doses are increasingly common in therapeutic regimens, and each new daily dose introduced in the treatment, for a continuous period, leads to a direct reduction in medication adherence rate. [23] Thus, it is assumed that the adherence of the participants of the above study [3] can be explained by the short time analyzed regimen.

In the meantime, there are factors that can interfere with adherence to treatment, such as advanced age, socioeconomic factors, fear of possible complications, low level of education, the need for the drug intake every day, recurrent ambulatory monitoring, food and drug interaction, self-perceived health status [3, 24] corroborating the findings of this research, where clinical and socioeconomic factors were found to be more prevalent.

The cost of the medication was seen as a major obstacle to adherence. [12, 13] Studies show that patients who presented satisfactory adherence spent less money on the drug compared to those who had average or low adherence. The high cost of medicine, transportation expenses for mobility to the health service and the long treatment were also identified as predisposing factors for low medication adherence. [10, 11]

Furthermore, as the clinical factors, the prolonged period of anticoagulation, the possible complications and the need for frequent laboratory control were identified as obstacles that hinder the continuity of treatment. [5, 6, 8, 11, 13, 15, 17]

The literature suggests that the laboratory control should be done every one or two days until the INR therapeutic is achieved. When the INR stabilizes, the control should be weekly and after that monthly, even patients who maintain the stability

of therapeutic anticoagulation levels should undergo INR evaluation monthly. It is noteworthy that individual aspects, such as instability unexplained and comorbidities should establish other intervals between returns and assessments. [3]

These barriers are added when considering the factors associated with the health service, as the service is provided, receiving visits from family health team, patient-professional communication, the orientation of patients about the risks and benefits of treatment, among others. [24]

Some measures have been adopted to try to reverse the situation to improve adherence to therapy, being essential to establish reliable relationships between the user and professionals, as well as clarity of the recommendations. [21]

From this perspective, it is clear that nurses in clinical practice are faced increasingly with patients using OAT under their care, and therefore, it is necessary for the patient and this professional establish a mutual relationship of partnership, where the nurse seeks to involve the patient in the therapeutic process, helping him to understand the need to take changes in his lifestyle, contributing to reducing complications and better treatment adherence. [25]

Thus, adhering to treatment is shown as a key factor for proper control of any disease, a phenomenon that is evidenced by the active participation of the patient in treatment. In this context, the nurse together with the multidisciplinary team is essential to promote health education activities to minimize the factors that interfere with the continuity of therapy since the adherence, and INR stability is fundamental to successful treatment. [15, 26]

Conclusions

From the found scientific production, it was found that most articles showed poor adherence to therapy with the OAT and identified factors that influence this discontinuation of drug treatment, such as psychosocial, socioeconomic, comorbidities, educa-

tion level, fear of complications and long treatment therapy demand, among others.

Thus, it is realized that a collaboration between patients and health professionals should be strengthened to improve adherence to health systems. Dialogue with patients can help in understanding motivation problems and helping health professionals to provide adequate care for these patients, helping them gain a sense of normalcy and improving adherence, reducing the difference found between what is proposed and the reality of clinical practice.

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