

AVALIAÇÃO DO ACOMPANHAMENTO FARMACOTERAPÊUTICO DE IDOSOS HOSPITALIZADOS EM USO DE ANALGÉSICOS OPIOIDES

EVALUATION OF THE PHARMACOTHERAPEUTIC FOLLOW-UP OF THE HOSPITALIZED ELDERLY IN THE USE OF OPIOID ANALGESICS

EVALUACIÓN DEL SEGUIMIENTO FARMACOTERAPÉUTICO DE ANCIANOS HOSPITALIZADOS EN EL USO DE ANALGÉSICOS OPIOIDES

Alex Douglas Alves Pereira dos Santos¹, Igor Gonçalves de Souza², Jéssica Soares Malta³, Josiane Moreira da Costa⁴, Kênia Lara Silva⁵

RESUMO

Objetivos: Identificar resultados do acompanhamento farmacoterapêutico de idosos hospitalizados em uso de analgésicos opioides. **Métodos:** Realizou-se um estudo descritivo e retrospectivo, integrado a um Programa de Residência Multiprofissional em Saúde do Idoso. Os critérios para encaminhamento ao serviço foram estar em uso de opioides e/ou com queixa de dor. Após captação dos pacientes, realizou-se análise da farmacoterapia e, mediante necessidade, intervenções foram efetuadas. **Resultados:** No total, foram analisados dados referentes ao acompanhamento de 53 pacientes, com média de idade de 73 anos (desvio-padrão $\pm 14,8$). Identificaram-se 85 evoluções farmacêuticas, sendo 36 com registro de uso de opioides. Tramadol, codeína, morfina e metadona foram os opioides utilizados no grupo estudado. As principais reações adversas registradas foram constipação, náusea e vômito. Foram realizadas 26 intervenções direcionadas a esses medicamentos. **Conclusão:** Quando devidamente monitorados, os riscos provenientes do uso de opioides, sejam eles reais ou potenciais, são passíveis de detecção em tempo hábil, permitindo a execução de ações que previnam, amenizem ou eliminem desfechos negativos. A busca por qualificação e a cooperação entre profissionais pode auxiliar o desenvolvimento de habilidades que forneçam aos pacientes uma melhor experiência ao longo dos serviços de acompanhamento.

Descritores: Dor; Idoso; Analgésicos Opioides; Assistência Farmacêutica; Uso de Medicamentos.

ABSTRACT

Objectives: To identify the results of the pharmacotherapeutic follow-up of the hospitalized elderly in the use of opioid analgesics. **Methods:** A retrospective and descriptive study was carried out, integrated with a Program of Multiprofessional Residency in Elder Health. The criteria for referral to the service were being using opioid and/or complaining of pain. After acquisition of patients, there was an analysis of the pharmacotherapy and, if necessary, interventions were made. **Results:** In total, there was the analysis of data relating to the follow-up of 53 patients, with a mean age of 73 years (standard deviation ± 14.8). There were 85 pharmaceutical evolutions, being 36 with a record of use of opioids. Tramadol, codeine, morphine and methadone were the opioids used in the group studied. The main adverse reactions recorded were constipation, nausea and vomiting. There were 26 interventions directed to these medicines. **Conclusion:** When properly monitored, the risks from using opioids, whether actual or potential, are detectable in a timely manner, allowing the implementation of actions to prevent, mitigate or eliminate negative outcomes. The search for qualification and the cooperation between professionals can assist in the development of skills that provide patients with a better experience over follow-up services.

Descriptors: Pain; Aged; Analgesics, Opioid; Pharmaceutical Services; Drug Utilization.

RESUMEN

Objetivos: Identificar los resultados del seguimiento farmacoterapéutico de ancianos hospitalizados en el uso de analgésicos opioides. **Métodos:** Se realizó un estudio retrospectivo y descriptivo, integrado con un Programa de Residencia Multiprofesional en Salud de los Ancianos. Los criterios para su encaminhamiento al servicio fueron estar en el uso de opioides y/o quejándose de dolor. Tras la captación de los pacientes, se realizó el análisis de la farmacoterapia y, por necesidad, se realizaron intervenciones. **Resultados:** En total, se analizaron los datos relativos al seguimiento de 53 pacientes, con una edad media de 73 años (desviación estándar $\pm 14,8$). Se identificaron 85 evoluciones farmacéuticas, siendo 36 con un registro de uso de opioides. Tramadol, codeína, morfina y metadona fueron los opioides utilizados en el grupo estudiado. Las principales reacciones adversas registradas fueron el estreñimiento, náuseas y vómitos. Se realizaron 26 intervenciones dirigidas a estos medicamentos. **Conclusión:** Cuando se supervisa de manera apropiada, los riesgos del uso de opiáceos, ya reales o potenciales, pueden ser detectados de manera oportuna, permitiendo la implementación de acciones para prevenir, mitigar o eliminar los resultados negativos. La búsqueda de la cualificación y la cooperación entre profesionales pueden ayudar en el desarrollo de habilidades que proporcionan a los pacientes una mejor experiencia en los servicios de seguimiento.

Descriptores: Dolor; Anciano; Analgésicos Opioides; Servicios Farmacéuticos; Utilización de Medicamentos.

¹Farmacêutico especialista em Farmácia Clínica e Farmacologia Clínica pela Fundação Educacional Lucas Machado ²Farmacêutico especialista em Atenção em Terapia Intensiva pela Secretaria Municipal da Saúde de São Paulo . ³Farmacêutica mestranda em Medicamentos e Assistência Farmacêutica pela Universidade Federal de Minas Gerais. ⁴Farmacêutica mestra em Saúde e Enfermagem e doutoranda em Medicamentos e Assistência Farmacêutica pela Universidade Federal de Minas Gerais ⁵Enfermeira, doutora em Enfermagem pela Universidade Federal de Minas Gerais.

How to cite this article:

Santos ADAP, Lima RS, Souza IG, Malta JS, *et al.* Evaluation of the pharmacotherapeutic follow-up of the hospitalized elderly in the use of opioid analgesics. Revista de Enfermagem do Centro Oeste Mineiro. 2020;10:e3665. [Access _____]. Available in: _____ .DOI:http://doi.org/10.19175/recom.v10i0.3665.

INTRODUCTION

Chronic pain is prevalent in 29% of elderly Brazilians⁽¹⁾, reaching 35 through 51% of Europeans⁽²⁾ and, in a general way, it affects 52.9% of Americans⁽³⁾. Pharmacological and non-pharmacological measures can be implemented as treatment, in order to promote relief and improve the quality of life⁽⁴⁾.

In the pharmacological context, the opioid analgesics comprise one of the most used classes, being considered the first-line treatment in severe acute and/or chronic pain in most parts of the world⁽⁵⁾. However, the use of these medications, in the long term, presents controversies, with concerns related to the effectiveness, safety and misuse. This makes their use more restrictive, impairing the adequate control of pain in cases in which the use of opioids would be indicated⁽⁶⁾.

The good clinical practice recommends dividing the treatment into three main stages, consisting of titration (test), adjustment (individualization), and transition (gradual reduction). Nevertheless, there are no specific guidelines to be followed for the treatment of pain, and the outcomes can be dangerous in case there is no adequate knowledge of the patient and the medicine⁽⁷⁾. According to the World Health Organization (2014), almost 70 thousand people die every year due to overdose of opioid substances such as morphine, heroin and oxycodone⁽⁸⁾. When considering the use of opioid analgesics in the elderly population, this issue requires an even greater caution. Due to the great longevity, the elderly have some peculiarities, such as physiological changes, use of polypharmacy (five or more medications) and other clinical complications resulting from chronic health problems⁽¹⁾. These factors may affect the effectiveness and safety of the use of opioids, requiring the continuous follow-up of the pharmacotherapy of these patients, during the analgesia with those medications.

In this sense, improvements have been observed when collaborative practices involve the clinical pharmacist, not only in the analgesia, but in the effectiveness and safety of pharmacotherapy when these professionals are inserted in a multiprofessional team⁽⁹⁻¹¹⁾. The multiprofessional assistance, such as with the nursing professional, is of great importance since this professional's activity involves the direct care to the patient, being the most indicated to assist in the identification of ineffectiveness of pharmacotherapy, such as presence of pain,

adverse reactions, errors of administration and others⁽⁵⁾. This is an important factor, since the treatment with opioid is considered an indicator of the quality of pain management in a country⁽¹²⁾.

Upon judging the growing need for use of opioid analgesics for the elderly population, the specificities related to the impairment of the effectiveness and safety of the use of those medications, the impact of pain on quality of life and the possible contributions of the pharmacist in the multiprofessional approach of those patients, this study aimed to identify the results of the pharmacotherapeutic follow-up of the hospitalized elderly in use of opioids.

METHODS

Study design and site

This is a descriptive and retrospective study performed in a general hospital, reference for the network of attention to urgencies and emergencies in the metropolitan region of Belo Horizonte, Brazil. Data collection occurred in April 2018, with the identification of the patients followed-up in the service between January and April 2016. The hospital has roughly 360 beds, divided in the following units: Intensive Care Center, Emergency Room, Maternity, Medical Clinic and Surgical Clinic. The hospital has computerized system for management and medical records.

Pharmacotherapeutic follow-up

The Pharmacotherapeutic Follow-up service is linked to a Program of Multiprofessional Residency in Elder Health, where intern pharmacists were incorporated to this service. The Pharmacotherapeutic Follow-up service consists of the phases described below.

Acquisition of patients in the pharmacotherapeutic follow-up service

The patients were referred to the service through active search, as well as referral by other professionals who comprised the multiprofessional team reference for the multiprofessional residency program in elder health. The multiprofessional team was composed of professionals from the areas of social assistance, nursing, pharmacy, physical therapy, speech-language therapy, medicine, psychology and occupational therapy. The professionals meet weekly for discussion of the cases of patients followed-up. The criteria for referral were the identification of patients in use or with indication of medicine for pain, with reports of complaints of pain or that had any suspected adverse reaction to

opioids. The referrals were made verbally or through record in an electronic medical record held by the professional responsible for the referral. Any professional who comprised the multiprofessional team could refer patients to the pharmacotherapeutic follow-up service, after the identification of one of the referral criteria. After receiving the verbal or written referral, the patient was inserted in the list of patients to be followed-up.

After the acquisition, the patients were interviewed in order to identify the knowledge and possible doubts in relation to the use of opioid analgesics. Using the pain scale of the World Health Organization⁽¹³⁾, the patients' pain is measured, followed by the analysis of pharmacotherapy. Since the multiprofessional team was a reference for the training of interns in the multiprofessional residency program in elder health, patients followed-up by the team met the following inclusion criteria: age over 60 years, having been met in patient care units with Cerebral Vascular Accident, Palliative Care, Vascular Involvement or Fracture of the Femur. These criteria were established by the clinical board of the institution upon considering that these profiles of patients tend to present greater demand for multiprofessional care.

Analysis of the pharmacotherapy

This phase involved the identification of the necessary interventions, the estimated creatinine clearance for the execution of possible adjustments of dosages in the used medication and analysis of the indication and the effectiveness of the pharmacotherapy of pain from the reports of patients. The analyses were performed with information recorded in the medical records, prescriptions, and laboratory exams, in addition to performing daily visits to patients.

Accomplishment of interventions

When identified the need for interventions, these were made through the analysis of the indication, effectiveness and safety of pharmacotherapy. From different pre-existing clinical services and with the support of the scientific literature⁽¹⁴⁾, 22 possibilities of pharmaceutical interventions were standardized, namely: exchange of pharmaceutical type; exchange of active principle; increasing the dosage; reducing the dosage; changing the time of administration; requesting laboratory tests; completion of intervention with the nursing team about techniques and times of administration;

referral of the patient to another health professional; provision of health education to the patient and/or caregiver; recommendation to include a new medicine in the pharmacotherapy; recommendation to initiate pharmacotherapy for untreated health problem; resolution of discrepancies between pre-admission/admission medications; need for monitoring the effectiveness and safety of pharmacotherapy; suggestion of withdrawing the drug from therapy; intervention with nursing in relation to the measurement of pain; and the classification "others", if the options did not contemplate the action performed.

From the identification of pharmacotherapeutic problems related to the indication, effectiveness and safety, there was the identification of the professional category to be contacted for the resolution of the problem identified. In case of intervention with the nursing professional, there was the verbal contact with the nurse responsible for the patient at the bedside. The pain was measured considering the schedules of administration of medications and peak of action. The pain was measured before the administration of medicines, 10 minutes after administration of injectable medicines, and in periods considering the half-life length and peak action of each drug, as institutional protocol for pain management. At the time of evaluation of these interventions, the hospital did not adopt formal methods of non-pharmacological interventions for pain relief.

Indication-related problems were discussed with the medical team in order to indicate replacement or modification of the dosage. In the event of a suspected problem of effectiveness of pharmacotherapy, the contact was performed first with the nursing team, to aid in the measurement of pain and, subsequently, the medical team was contact to discuss the case for possible increase of dosage. The safety problems were assessed in order to identify the administration of high dosages or incorrect administration of medication. In this situation, the nursing team was contacted directly and the nursing technician was accompanied by the pharmacist at the time of administration of the drug.

After the interventions conducted with the professionals, the patient remained under pharmaceutical follow-up to evaluate the resolution of the problems identified. The whole process that involves the intervention was

recorded in medical records, through pharmaceutical evolution and recorded by the nursing staff, as recommended by the systematization of nursing assistance.

Data collection and analysis

With the aid of the "Records of Pharmaceutical Evolutions", a computerized report was generated and, from the data obtained in this report, there was the analysis of the variables considering age, gender, length of hospital stay, opioid analgesic in use, measurement of pain, and pharmaceutical intervention performed. A descriptive analysis was performed according to a model of central tendency for quantitative variables and the percentile for the qualitative variables, with these analyses performed with the aid of the EpiData® statistical software.

The present study was performed according to the standards set out in Resolution 466/2012 of the National Health Council, in relation to researches involving human beings, and was approved by the Research Ethics Committee at the Federal University of Minas Gerais, by signing of the assent forms of the institution and receiving the record CAAE: 42681215.5.0000.5149.

RESULTS AND DISCUSSION

There was the follow-up of 53 patients, with a mean age of 73 years (standard deviation + 14.8). Of these, 18 (34.0%) were men and 35 (66.0%) were women. The mean hospitalization length was 23 days. Table 1 shows some characteristics of the patients included in the study.

Table 1 - Characterization of the patients included in the study.

Specification of the variable	Patients with record of opioid use (%)	Patients without record of opioid use (%)	Patients with alternate use and non-use of opioids (%)	Total (%)
Mean age	70	77.9	70	NA*
Mean hospitalization length in days	20	19	32	NA*
Female gender	13 (37.1%)	20 (57.2%)	2 (5.7%)	35 (100.0%)
Male gender	6 (33.3%)	11 (61.1%)	1 (5.6%)	18 (100.0%)
Renal involvement record	4 (20.0%)	15 (75.0%)	1 (5.0%)	20 (100.0%)
Death record	0	1 (100.0%)	0	1 (100.0%)

Source: the authors, 2016.*Not applicable.

The mean age presented in this work was close to the average of 75 years observed in other studies involving the elderly^(11,16). This reinforces the idea that people in advanced age are more likely to be affected by painful conditions associated or not to a base disease, raising the demand for specialized care and causing the increasing need for hospitalizations. On the other hand, this result may be a reflection of the type of

population met by the service where this study was conducted.

There were 85 pharmaceutical evolutions, with 82 (96.5%) records of pain measurement. Of the total number of evolutions in the pain measurement, 63 (76.8%) reported no pain, 6 (7.3%) reported mild pain, 11 (13.4%) moderate pain, and 2 (2.4%) intense pain, as shown in Table 2.

Table 2 - Quantification of evolutions according to the degree of pain reported among patients that used and did not use opioid analgesics.

Specification of the evolution	Pharmaceutical evolutions that recorded use of opiates (%)	Pharmaceutical evolutions without record of use of opioids (%)	Not assessed (%)
Absence of pain	24 (66.7%)	39 (79.6%)	
Mild pain	3 (8.3%)	3 (6.1%)	
Moderate pain	4 (11.1%)	7 (14.3%)	11 (100.0%)
Intense pain	2 (5.6%)	0	
No record of measurement	3 (8.3%)	0	
Total	36 (100.0%)	49 (100.0%)	11 (100.0%)

Source: the authors, 2016.

Of all patients with record of opioid use (19), 13 (68.0%) used tramadol, 4(21%) codeine, 1

(5.5%) morphine and 1 (5.5%) methadone. In a general way, the evolutions involving tramadol

and codeine were more frequent. The specification of the number of evolutions per used opioid, followed by the respective records of

presence or absence of pain, according to intensity, are shown in Table 3.

Table 3 - Specification of the number of evolutions per used opioid and respective record of absence or presence of pain, according to the intensity.

Opioid	Evolutions with record of opioid use	Evolutions with record of mild pain	Evolutions with record of moderate pain	Evolutions with record of intense pain	Evolutions with record of absence of pain	Evolution without record of pain measurement
Tramadol	22 (61,1%)	3 (100,0%)	2 (50,0%)	0	14 (58,3%)	3 (100,0%)
Codeine	12 (33,3%)	0	2 (50,0%)	0	10 (41,7%)	0
Morphine	1 (2,8%)	0	0	1 (50,0%)	0	0
Morphine + Methadone	1 (2,8%)	0	0	1 (50,0%)	0	0
Total	36 (100,0%)	3 (100,0%)	4 (100,0%)	2 (100,0%)	24 (100,0%)	3 (100,0%)

Source: the authors, 2016.

Although there are variations in the prevalence of pain in the elderly population, pain measurement is assumed to be necessary in the clinical context, being important to implement guidelines⁽¹⁵⁾. Similar to other studies⁽¹⁶⁻¹⁷⁾, there was a relevant number of pharmaceutical interventions aimed at the care with patients in the present study, which reinforces the importance of providing clinical pharmacy service to this group of patients. Nonetheless, it is important to say that the number of interventions does not determine the quality of the follow-up, but how useful they are for improving the treatment, favoring the effectiveness and safety of the drugs in use.

Upon analyzing the reports of the occurrence of pain among men and women, there was a predominance of complaints (and the use of opioid analgesics) in the female group. This result may have occurred not only by the fact that women are the majority who compose the studied sample, but also because of the greater frequency of verbalization by this group when compared to men⁽¹⁸⁾. In the results of a longitudinal research, performed with 494 elderly people from a project called Health, Well-being and Aging (SABE), characteristics such as age and gender were not predictive of pain in this population⁽¹⁹⁾.

Although the present study does not aim to define the triggering causes of pain in patients, it is pertinent to point out the frequent execution of surgical procedures for diabetic foot amputation in the hospital of study. This characteristic may predispose to the increased occurrence of pain in this scenario, demanding greater attention in the management of analgesia, which can feature high complexity in these cases.

In terms of the measurements with records of pain, some patients reported pain even under use of opioids. Other reported pain, but did not use any opioid medication. These situations demonstrate the existence of inappropriate treatment in the process of pain management in both groups, pointing to the need for interventions adopted concerning the adjustment of the dosage, introduction or exchange of medicine, among other measures.

The occurrence of persistent pain, even in the use of opioid, reveals the need for measures capable of optimizing the analgesia used. The pharmacotherapeutic follow-up of patients provides the identification and resolution of the various issues that hinder the achievement of therapeutic goals in patients with pain. The inadequate control of pain, in addition to causing an uncomfortable experience for the patient, influences the hospitalization length, the costs involving pharmacotherapy, control and treatment of health problems associated with patient safety before the established therapy⁽²⁰⁾.

Even though the pain signals inadequate analgesia, the use of opioid before this complaint is not always indicated, once the proper treatment of pain depends on its cause, intensity and particularities of the patient⁽⁴⁾. The World Health Organization has proposed, through the analgesic ladder, the implementation of different treatments according to the patient's pain intensity⁽¹³⁾. In this way, different levels of pain are treated with the use and/or combination of non-steroidal analgesics, weak and strong opioids and other adjuvant drugs, in addition to non-pharmacological measures. The absence of opioids in pharmacotherapy of the elderly included in this study, therefore, does not exclude

the use of other measures towards pain relief. Consequently, the results reveal that patients whose evolutions do not contain the use of opioid complain of mild to moderate pain, which may have been treated with other non-opioid drugs. The American Association of Geriatrics recommends the use of opioids in the elderly who suffer from moderate to severe pain⁽⁵⁾.

Situations with no reports of pain and no use of opioid analgesics demonstrate that the patient may have pain controlled by other weaker analgesics or, even by non-pharmacological measures, however, indeed, there is no indication of including an opioid in the instituted pharmacotherapy.

Those patients who were not using opioid and reported mild or moderate pain indicate the need for inserting some analgesic medication. Those situations with reports of intense pain and use of opioid analgesics may indicate pain associated with more extreme interventions, such as amputation and, therefore, the need for

interventions, follow-up and adjustments of the analgesia. The hospital has an institutional protocol for pain management, but the professionals' adherence to the protocol should be monitored with greater frequency. Furthermore, many opioids are prescribed for the administration only in case of pain and as the criteria observed at the bedside or, even, prescribed in low dosages, factors often associated with fear of using opioids⁽¹¹⁾.

Of the total number of evolutions with a record of use of opioids, there were 26 interventions directed to these drugs, corresponding to an average of 0.7 interventions per Pharmaceutical Evolution. The interventions consisted of adjusting the dosage and administration techniques, health education, recommendations for the introduction of new medication, and others. Among the interventions, health education was the most recurring. Table 4 shows the types of intervention performed per opioid.

Table 4 - Interventions executed and drugs involved.

Opioid	Total number of interventions	Specification of the intervention	Number of interventions (%)
Tramadol	14	Recommendation to introduce a new drug in the pharmacotherapy	2 (14.3%)
		Measuring pain with nursing	1 (7.1%)
		Adjustment of administration techniques and schedules with the nursing team	1 (7.1%)
		Health education	9 (64.3%)
		Others	1 (7.1%)
Codeine	7	Dosage adjustment/reduction	1 (14.3%)
		Health education	5 (71.4%)
		Others	1 (14.3%)
Morphine	5	Recommendation to introduce a new drug in the pharmacotherapy	1 (20.0%)
		Health education	1 (20.0%)
		Others	3 (60.0%)
Total			26 (100,0%)

Source: the authors, 2016.

The most frequent complaints of pain were those of moderate and mild degree, and the use of weak opioids (tramadol and codeine) was more frequent. These are the opioid of choice regarding less intense pains. In a study that described the results of the pharmacotherapeutic follow-up of the elderly using opioid analgesics in Brazil, the use of tramadol and codeine was also more prevalent⁽¹¹⁾. The use of tramadol (equivalent to 61.1% of the records with the opioid use in the present study) is associated with increased safety in the elderly, when compared to other analgesics in the same class⁽²¹⁾.

Analyzing the two most commonly used opioids, there was a more effective pain control in

patients using codeine, possibly by being employed in less severe pain. The administration of morphine and methadone was performed for a single patient with high-degree pain. Sometimes, the effective cessation of pain is hampered by issues associated with the patients and/or professionals that meet them. In this context, the advanced age, other previous health problems (several patients had renal involvement), and polypharmacy may have supported the adoption of more cautious behaviors regarding complaints of pain in the groups that used and did not use opioids.

A considerable number of pharmaceutical interventions was obtained in the present study,

with emphasis on those focused on patient education and management of pharmacotherapy. Such actions have the power to mitigate the damage and fit the analgesia, nationally and internationally recommended⁽⁶⁾. As demonstrated in another study conducted in Brazil⁽¹¹⁾, a greater number of interventions were performed in order to optimize the effectiveness of treatment with opioid analgesics. This reinforces the need for continuous follow-up of the elderly in opioid use and frequent monitoring of the analgesia instituted, since adjustments are routinely required. Moreover, the pharmacist's work, together with the health team and the patient, is essential, which can be evidenced by the considerable number of interventions related to health education and with nursing.

The educational actions for the multiprofessional team, mainly for the nursing team, should be carried out along the core of ongoing education, which allows directing a nursing professional qualified to conduct the training. In addition, the trainings should involve different professionals, aiming to raise awareness throughout the team that provides care of the importance of pain in the context of the patient's health and to demystify the fears about administration of opioids.

Adverse reactions to these drugs were mild, with prevalence of constipation, nausea and vomiting. In the process of data analysis, there were six suspected adverse reactions associated with the use of opioids. Table 5 describes the types of reactions found and the opioids involved.

Table 5 - Opioid drugs involved in the adverse reactions.

Drugs involved in the adverse reactions	Number of adverse reactions per drug	Description of the adverse reaction
Tramadol	4	Nausea, vomiting, urinary retention, xerostomia
Codeine	1	Constipation
Morphine	1	Constipation

Source: the authors, 2016.

Problems related to opioid analgesics are discussed in several works and involve since the risk of fractures⁽²²⁾, development of dependency, overdose, to death⁽²³⁾. During the follow-up period, events such as constipation, nausea, vomiting, xerostomia and urinary retention were highlighted, not diverting from the main adverse reactions currently described in systematic reviews⁽²⁴⁾. Even if these reactions do not occur exclusively in the elderly population, they can present an exacerbate development in these individuals, considering the physiological alterations and adjacent conditions that develop as age advances⁽¹⁾. Besides the health problem itself, the occurrence of adverse reactions is able to interfere with adherence to therapy, compromising the therapeutic success.

Even though there were reports of adverse reactions involving the use of opioid analgesics, there were no pharmaceutical interventions aiming to ensure the safety of therapy with these drugs. Especially in the elderly, whose sensitivity to adverse events is increased⁽²⁵⁾, professionals need to be able to act in order to prevent and deal with such problems.

Due to the large number of people follow-up in the service, there may have been flaws during the record process for measuring pain, which justifies the lack of this information in some

medical records. This fact, however, does not rule out the possibility of omission on the part of the patient.

A limiting factor of this study is the fact that data were collected retrospectively, not allowing directly assessing the level of pain of each patient and correlating it with the treatment instituted prospectively. In addition, the risk of development of dependence was not evaluated. There is need for Brazilian studies investigating the impact of pharmaceutical interventions outside the three main strands: hospitalization length, restoration/improvement of health, and patient satisfaction. Also at national level, the implementation of non-pharmacological measures in pain treatment of hospitalized individuals needs greater scientific dissemination, once, in the clinic, all therapeutic alternatives should be considered.

CONCLUSION

In this study, the pain control was achieved for most patients, although some of them have reported pain, even using opioids. In this way, when properly monitored, the risks from the use of opioids, whether actual or potential, are detectable in a timely manner, allowing the implementation of actions to prevent, mitigate or

eliminate negative outcomes. Furthermore, the quest for qualification and the cooperation among professionals can assist in the development of skills that provide patients with a better experience over the follow-up services.

The clinical pharmacy service allowed executing a considerable number of interventions, capable of promoting the appropriate use of opioid analgesics and potentiating the adequate control of pain in the elderly. The study also points to the importance of multiprofessional approach in controlling patients' pain, contributing to signaling the importance of effective pain measurement and mitigating fears in relation to the use of opioid medications.

REFERENCES

- 1- Dellaroza MS, Pimenta CAM, Duarte YA, Lebrão ML. Dor crônica em idosos residentes em São Paulo, Brasil: Prevalência, características e associação com capacidade funcional e mobilidade (Estudo SABE). *Cad Saúde Pública* 2013;29(2):325-34. DOI: 10.1590/S0102-311X2013000200019
- 2- Fayaz A, Croft P, Langford RM, Donaldson LJ, Jones GT. Prevalence of chronic pain in the UK: A systematic review and meta-analysis of population studies. *BMJ Open* 2016;6(6):1-13. DOI: 10.1136/bmjopen-201501036
- 3- Patel K, Guralnik J, Dansie E, Turk D. Prevalence and impact of pain among older adults in the United States: Findings from the 2011 National Health and Aging Trends Study. *Pain* 2013; 154(12):2649-57. DOI: 10.1016/j.pain.2013.07.029
- 4- Wood H, Dickman A, Star A, Boland JW. Updates in palliative care – overview and recent advancements in the pharmacological management of cancer pain. *Clin Med*. 2018; 18(1):17-22. DOI: 10.7861/clinmedicine.18-1-17
- 5- Nawai A, Leveille SG, Shmerling RH, Leeuw GV, Bean JF. Pain severity and pharmacologic pain management among community-living older adults: The MOBILIZE Boston study. *Aging Clin Exp Res*. 2017;29(6):1139-47. DOI: 10.1007/s40520-016-0700
- 6- Dowell D, Haegerich TM, Chou R. CDC guideline for prescribing opioids for chronic pain – United States, 2016. *JAMA* 2016 [citado em 15 fev 2019]; 315(15):1624-45. Available in: <https://jamanetwork.com/journals/jama/fullarticle/2503508>
- 7- Coluzzi F, Taylor Junior R, Pergolizzi Junior JV, Mattia C, RaffaRB. Orientação para boa prática clínica para opioides no tratamento da dor: Os três “Ts” - titulação (teste), ajustes (individualização), transição (redução gradual). *Rev Bras Anestesiologia*. 2016;66(3):310-7. DOI: 10.1016/j.bjan.2016.02.008 0034-7094
- 8- World Health Organization (WHO). Management of substance abuse: Information sheet on opioid overdose. Washington, DC: WHO; 2018.
- 9- Donovan AL, Aldrich JM, Gross AK, Barchas DM, Thornton KC, Schell-Chaple HM, et al. Interprofessional care and teamwork in the ICU. *Critical Care Medicine* 2018;46(6):980-90. DOI: 10.1097/CCM.0000000000003067
- 10- Bauer SR, Kane-Gill SL. Outcome assessment of critical care pharmacist services. *Hosp Pharm*. 2016;51(7):507-13. DOI: 10.1310/hpj5107-507
- 11- Ribeiro H, Costa J. Acompanhamento farmacoterapêutico de idosos em uso de analgésicos opioides em um hospital de ensino. *Rev Bras Farm Hosp Serv Saúde* 2015 [citado em 18 mar 2019]; 90(1):18-23. Available in: <http://www.v1.sbrafh.org.br/public/artigos/2015060104000654BR.pdf>
- 12- Waljee JF, Zhong L, Hou H, Sers E, Brummet C, Chung KC. The utilization of opioid analgesics following common upper extremity surgical procedures: A national, population-based study. *Plast Reconstr Surg*. 2016;137(2): 355-64. DOI: 10.1097/01.prs.0000475788.52446.7b
- 13- World Health Organization (WHO). Cancer pain relief: With a guide to opioid availability. 2a ed. Washington, DC: WHO; 1996
- 14- Charalambous A, Zorpas M, Cloconi C, Kading Y. Healthcare professionals' perceptions on the use of opioid analgesics for the treatment of cancer-related pain in Cyprus: A mixed-method study. *SAGE Open Med*. 2019;4(7): 2050312119841823. DOI: 10.1177/2050312119841823
- 15- Schofield P. The assessment of pain in older people: UK National Guidelines. *Age Ageing*. [Internet] 2018; 47(Suppl 1):1-22. DOI: 10.1093/ageing/afx192
- 16- Viana S, Arantes T, Ribeiro S. Intervenções do farmacêutico clínico em uma unidade de cuidados intermediários com foco no paciente idoso. *Einstein* 2017;15(3):1-6. DOI: 10.1590/s1679-45082017ao3894
- 17- Cortejoso L, Dietz RA, Hofmann G, Gosch M, Sattler A. Impact of pharmacist interventions in older patients: A prospective study in a tertiary hospital in Germany. *Clin Interv Aging* 2016 [citado em 22 mar 2019]; 11:1343-50. Available in:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5045027/pdf/cia-11-1343.pdf>

18- Hecke N, Smith B. Chronic pain epidemiology and its clinical relevance. *Br J Anaesth.* 2013; 111(1):13-8. DOI: 10.1093/bja/aet123

19- Bettiol CH, Dellaroza MS, Lebrão ML, Duarte Y, Santos H. Fatores preditores de dor em idosos do município de São Paulo, Brasil: Estudo SABE 2006 e 2010. *Cad. Saúde Pública* 2017;33(9):1-12. DOI: 10.1590/0102-311X00098416

20- Satghare P, Chong S, Vaigankar J, Picco L, Abdin E, Chua B, et al. Prevalence and Correlates of Pain in People Aged 60 Years and above in Singapore: Results from the WiSE Study. *Pain Res Manag.* 2016;2016:1-7. DOI: 10.1155/2016/7852397

21- 21. Solomon DH, Rassen JA, Glynn RJ, Garneau K, Levin R, Lee J, et al. The comparative safety of opioids for nonmalignant pain in older adults. *JAMA Intern Med.* 2010;170(22):1979-86. DOI: 10.1001/archinternmed.2010.450

22- Krebs EE, Paudel M, Taylor BC, Bauer DC, Fink HA, Lane NE, Enrud KE. Association of Opioids with Falls, Fractures, and Physical Performance among Older Men with Persistent Musculoskeletal Pain. *J Gen Intern Med.* 2016;31(5):463-9. DOI: 10.1007/s11606-015-3579-9

23- Lembke A, Humphreys K, Newmark J. Weighing the Risks and benefits of chronic opioid therapy. *Am Fam Phys.* 2016 [citado em 22 mar 2019]; 93(12):982-90. Available in: <https://www.aafp.org/afp/2016/0615/p982.html>

24- Els C, Jackson TD, Kunyk D, Lappi VG, Sonnenberg B, Hagtvedt R, et al. Adverse events associated with medium- and long-term use of opioids for chronic non-cancer pain: An overview of cochrane reviews. *Cochrane Database Syst Rev.* 2017;10(CD012509):1-44. DOI: 10.1002/14651858.CD012509.pub2

25- Martin CM. The other side of the opioid debate: Treating older adults with chronic pain. *Consult Pharm.* 2018;33(9):478-83. DOI: 10.4140/TCP.n.2018.478

Note: This article is a product of the conclusion work of Alex Douglas Alves Pereira dos Santos, in the specialization Farmácia Clínica e Farmacologia Aplicada à Prática Clínica, from Fundação Educacional Lucas Machado.

Received in: 14/02/2020

Approved in: 25/05/2020

Mailing address:

Rua Três Poderes, 195. Leblon. Belo Horizonte, Minas Gerais.

CEP: 31575-140

e-mail: malta.jessicas@gmail.com