Arnica Montana in Joint Pain in Elder People of UNIESTE* in Lisbon (*Intergenerational University of Estefânia Club)

Filipa Azevedo1, Henrique Augusto1, Marco Vieira2,4*, Ana Varela3 and Pascoal Amaral2

1ESMTC - Lisbon School of TCM, Lisbon, Portugal
2Superior Health School of Viseu, Polytechnic Institute of Viseu, Viseu, Portugal
3Department of Clinical and Research, ESMTC, Lisbon School of TCM, Lisbon, Portugal
4Oriental Med Clinics, Viseu, Portugal

Abstract

Introduction: The ageing of the population is responsible for the increase of osteoarticular diseases, linked to pain, joint deformation and functional disability. Because of that, it is emergent to ease the pain, in order to promote a better quality of life to elder people. In TCM (Traditional Chinese Medicine), joint pains are due to a local blockage in circulation, and they are usually associated to a differential diagnosis of Bi syndrome (wind, dampness, cold and heat) or to a combination of these factors. Herbal medicine has been used to “solve” this kind of cases; Arnica Montana, specifically, has been used since the XVI century. This plant has a warm nature and a slightly acid and sour flavour, and acts in joint pains and in muscle and bone traumas through the local incensement of Qi and blood circulation. Arnica is a natural painkiller that regulates Qi and blood.

Subject of research: The purpose of this study is to answer the subject of research which are the effects of an Arnica Montana oil in joint pains, in the elder community of unieste? (level 4)

Methodology: This pre-experimental, level 4 study, used an Arnica Montana oil (3%), applied during 28 days, in elder people, to assess the efficiency of this herb in the relieve of joint pains. The sample is composed by a control group (n=5) and an experimental one (n=5).

Keywords: Arnica Montana; Elder people; Joint pain

Introduction

The ageing of the population is responsible for the increase of osteoarticular diseases, linked to pain, joint deformation and functional disability. The main osteoarticular diseases in elder people are: osteoarthritis, rheumatoid arthritis and gout; these can cause pain and a negative impact in elder’s people life. For these reasons, the early recognition and suitable treatment of these diseases are essential to prevent deformities and to maintain the normal functionality and the quality of life of these individuals [1].

In TCM (Traditional Chinese Medicine), joint pains are due to a local blockage of the circulation, and they are usually associated to a differential diagnosis of Bi syndrome (wind, dampness, cold and heat) or to a combination of these factors, once they block Qi and blood circulation, when inside the body [2].

Herbal medicine, for both topical and internal use, has been widely used over the years, to cure these disorders and to help controlling its symptoms. Arnica Montana has been used since the XVI century, especially in Russia. It is considered the classic homeopathic herb to treat multiple types of traumas, and it is often employed in arteriosclerosis and by climbing practitioners, to relieve muscular pains and minimize bruises and contusions due to falls [3].

Its topical use is promoted as an useful treatment of inflammation and pain related to bruises, contusions, swelling, rheumatic pains in muscles and joints, and oedemas arising by fractures [4].

Accordingly, to Western medicine, Arnica Montana is anti-haemorrhagic, anti-microbial, analgesic, immunostimulant and anti-inflammatory, being indicated to joint pains. For medical purposes,
it is frequently used the extract removed from the dried flowers of the plant [3].

In accordance to TCM, Arnica Montana has a warm nature and a slightly acid and sour flavour, which can act in joint pains and in muscle and bone traumas, moving Qi and blood. It is a natural painkiller that also regulates both Qi and blood [5,6].

Previous studies shown the efficiency of Arnica Montana gel in cases of mild to moderate knee osteoarthritis [7], applied twice a day, during 6 weeks, and in cases of hand osteoarthritis, in which its effects can be equated to a Nonsteroidal Anti-inflammatory gel (NSAID) [8], making the topical use of this herb indicated to relieve joint pains.

Subject of Research

Which are the effects of an Arnica Montana oil, in joint pains, in the elder community of uniesta? (level 4)

Methodology

Study type

This project takes us to a pre-experimental study, connected to a level 4 subject of research, which aim to find the effects of an Arnica Montana oil in joint pains, in the elder community of UNIESTE.

Experimental draw

\[
\begin{align*}
G_c & : \text{Control Group} \\
G_e & : \text{Experimental Group} \\
O_1 & : \text{Initial observation (using VAS)} \\
O_2 & : \text{Midterm observation (using VAS)} \\
O_3 & : \text{Final observation (using VAS)} \\
- & : \text{Treatment absence} \\
X & : \text{Treatment (application of Arnica Montana oil)}
\end{align*}
\]

Legend

Materials and Methods

Materials


To the treatment:

- Almond oil
- Arnica Montana essence
- Oil recipients

To collect the data:

- Daily control form
- VAS scale (Figure 1)
- Diagnosis form

Analysis

The population of this study are the elder people with joint pains; the target population are the elder people with joint pains, living in Lisbon. Lastly, the accessible population are the elderly students registered in UNIESTE, with joint pains, living in Lisbon.

This is a non-probabilistic and rational sample, which means the judgement has been used to choose the elements of the sample, in order to obtain the pretended criteria to the present study.

The sample is composed by 10 individuals, allocated in two non-equivalent groups: one control group (n=5), and an experimental one (n=5).

Exclusion / Inclusion Criteria

The people to be included in this study are elder people with joint pains, living in Lisbon and willing to participate in this study.

Therefore, the ones not to be included are people younger than 60 years old, people without joint pains, and people that are currently taking medicines to relieve the pain.
Results and Discussion

Sample characterization

This sample presents heterogeneous results in what concerns to the characterization variables (age, group, and syndrome and gender). Because of that, it was not meaningful to analyse these variables and its analysis are not included in this section. Hereupon, what we should highlight from this descriptive analysis, are the differences between experimental and control groups, since the control and experimental averages of initial pain are different.

Results and discussion

In this section will be analysed the normality tests and the ones related to the study variables. In all the statistical tests in this study was used a confidence interval of 95%, with a significance of 0.05.

About the normality of the sample, the Kolmogorov-Smirnov test was performed, concluding that most of the variables have showed a normal distribution, implying the use of non-parametric tests to the data analysis.

As told before, one can notice that control group has an average level of initial pain one level above the one of the experimental group, making these groups not equal among them (Figure 2).

In agreement with Wilcoxon, there are significant differences between final and initial pain levels (p = 0.039) in the experimental group, where we can see improvements of approximately 3 levels of pain. There wasn’t any patient making it out without pain, being the minimum pain level equal to 3. In the control group weren’t noticed significant differences in pain levels (Figure 3).

Spearman correlation analysis has showed no significant correlation between the difference of initial and final pain and the patient’s age and/or the periodicity of oil application (Figure 4).

Conclusion

The next conclusions are based on the present study and in the obtained results in this particular research, through statistical analysis. In order to do that, a sample with 10 individuals was analysed having, as a main goal, to find the answer to the question: “Which Are the Effects of an Arnica Montana Oil, in joint Pains, In the Elder Community of Unieste?”

Answering to the question, we may conclude that there is a significant difference between final and initial pain in the experimental group, when compared to the control group, which support the hypothesis that the Arnica Montana oil (3%) can be an adjunct therapy in elder’s joint pain.

Although this is only a study of limited treatment and the success conclusions cannot be generalized from them, it is indicative that it would be interesting to carry out more research on this topic.

Conflict of Interest

The authors declare no conflict of interest and no funding source.

References
