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CASE STUDY OF THERAPUTIC EFFECT OF SOME PLANT SUPPLEMENTS CONTAINING *PASSIFLORA INCARNATA* L.

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ABSTRACT. This study aims to demonstrate the therapeutic effect in insomnia of *Passiflora incarnata* L. found in "Relaxirem Forte" (Remedia Laboratories) pelleted tablets and "Passiflora" (Hofigal) tablets. The study was conducted taking into account the principles of homeopathic *Pulsatilla* functional type. Patients in the study were carefully chosen to correspond to this type. This has demonstrated the importance of choosing a treatment based on herbal extracts according to each patient, state of sandalwood, mood, character, emotions, feelings and experiences. Through this study we wanted to demonstrate that in the treatment of insomnia with this plant species is important to select patients according to constitutional type.

KEYWORDS*: Passiflora incarnata L.,* insomnia, homeopathic constitutional type *Pulsatilla*.

INTRODUCTION

Passiflora incarnata, commonly known as maypop, purple passionflower, true passionflower, wild apricot or wild passion vine, is a fast growing perennial vine with climbing or trailing stems. A member of the passionflower genus *Passiflora*, the maypop has large, intricate flowers with prominent styles and stamens.

The stems can be smooth or pubescent; they are long and trailing, possessing many tendrils. Leaves are alternate and palmately 3-lobed and occasionally 5-lobed, measuring 6–15 centimetres (2.4–5.9 in). They have two characteristic glands at the base of the blade on the petiole. Flowers have five bluish-white petals. They exhibit a white and purple corolla with a structure of fine appendix between the petals and stamens. The large flower is typically arranged in a ring above the petals and sepals. They are pollinated by insects such as bumblebees and carpenter bees and are self-sterile. The flower normally blooms in July.

The fleshy fruit, also referred to as a maypop, is an oval yellowish berry about the size of a hen egg; it is green at first, but then becomes orange as it matures. The maypop occurs in thickets, disturbed areas, near riverbanks, and near unmowed pastures, roadsides, and railroads. It thrives in areas with lots of available sunlight. It is not found in shady areas beneath a forest canopy.

The aerial parts of *Passiflora* species have been traditionally used in Europe and America to treat anxiety, insomnia and nervousness.

Chemical analysis of *Passiflora incarnata* L.flower shows three main groups of active compounds: alkaloids, glycosides and flavonoids. Passionflower contains also natural serotonin and a compound called maltol which demonstrated sedative effects. A group of alkaloids in passionflower have demonstrated antispasmodic activity and the ability to reduce blood pressure.

As the dominant constituents of glycosides (0,8-2,5%) are di-C-heterosides apigenol and luteoline, respectively izovitexin-2 "-βD-glucoside (C- apigenol sophoroside), schaftoside (6-C-glucoside-apigenol arabinoside-C 8) izoschaftoside (C 6-arabinosyl-8-C-glucoside apigenol) izoorientin-2 "-O-β-D-glucoside, (C 6-sophoroside luteoline) and vicenoside-2 (6,8-di-C-glucoside apigenol).

The volatile oil is a mixture of terpene hydrocarbons (limonene, α-pinene, cumene zinzaen, zinzanen). The alkaloids present in *Passiflora incarnata*

L. are harman type, harmol, harmine and represents less than 0.03% . The most common of these is the harman (1-methyl-9H-b-carbolines), harmaline (4,9-Dihydro-7-methoxy-1-methyl-3H-pyrido [3,4-b] indole), harmanol (1-methyl-2,3,4,9-tetrahydropyrido [3,4-b] indol-7-1), harmine (7-methoxy-1-methyl-9H-pyrido [3,4-b] indole) and harmol.

This study aims to demonstrate the therapeutic effect in insomnia of *Passiflora incarnata* L. found in "Relaxirem Forte" (Remedia Laboratories) pelleted tablets and "Passiflora" (Hofigal) tablets.

The study was conducted taking into account the principles of homeopathic *Pulsatilla* function type. Patients, in the study were carefully chosen to correspond to this functional type. This wish to demonstrate the importance of choosing a treatment based on herbal extracts according to each patient, state of sandalwood, mood, character, emotions, feelings and experiences.

Pulsatilla is one of the most important homeopathic remedies. It has temperamental characteristics of a typically feminin person, mild, sensitive, who has a great personality, inner need attention, affection and protection that both demands and exudes love, affection, calm, soul. It is therefore of attributes that belong more or less, of all people, and especially to the woman, embodying perhaps best female typology.

MATERIALS AND METHODS

To reflect the effects of *Passiflora incarnata* L. species in treating insomnia study has been conducted for two weeks involving eight adult subjects, including four women and four men, who were suffering from chronic insomnia. Patients were selected according to the homeopathic considerations present a description of the plant *Anemone pulsatilla.*

The subjects were selected from all age groups some of them older, suffering from chronic diseases. It was observed the absorption, metabolism and interaction with drugs that they use for chronic diseases.

To observe the effects of PASIFLORA we used as materials in this study following plant supplements " Passiflora " (Hofigal) tablets containing powder of aerial parts of *Passiflora incarnata* L. 0.370 g and excipients qs ad 0.400 g , respectively " Relaxirem Forte " (Remedia Laboratories). "Relaxirem Forte" (Remedia Laboratories) tablets have in the composition 125 mg extract of valerian root (*Valeriana officinalis*) on a maize maltodextrin with over 0.8 % valeric acid; 62,5 mg extract of PASIFLORA *(Passiflora incarnata*) on a maize maltodextrin with 3.5% flavonoids expressed in vitexine; 25 mg Melissa Extract (*Melissa officinalis*) with 2% flavones, 25 mg Peppermint Leaf extract (*Mentha piperita*).

The study was conducted for two weeks, four of the subjects were treated with " Passiflora" (Hofigal) and four with " Relaxirem Forte" (Remedia Laboratories) .

There are some characteristics of the subjects participating in study.

Subject I-BV-treated with "Passiflora" (Hofigal), female, 24 years

She is a young woman with pale skin, green eyes and red hair. Some of the character traits are sensitivity, gentleness, sometimes with principles of dogmatism, suspicious and distrustful, considering that everyone around them betray, and has some fear of the opposite sex. She features allergic conjunctivitis or infection with itching and lacrimation predominantly unilateral, hemorrhoids, varicose veins and irregular menses. It is cold, but intolerant of any form of heat.

Subject II- NT treated with Passiflora"(Hofigal), female, 26 years

It's all light-skinned young woman, brown eyes and brown hair. As traits that qualify as a Pulsatilla are indecisiveness, always needing someone to counsel in taking a decision, turns red and cries easily. Wearing a tight seat and dark fear. As disorders she has urinary infections very common, severe palpitations at night, in bed or lying on the left, and cough with expectoration in the morning and in evening dry.

Subject III- NC trated with Passiflora" (Hofigal), male, 31 years

A kind, gentle, submissive man, who gets to be sad and discouraged, changing in character, everything changes from one minute to another. It pities himself to others and develops un explained dislike for a certain person. Shows bad taste in the mouth, but no thirst.

Subject IV- BV treated with „Passiflora" (Hofigal), male, 49 years

Another man as docile and gentle, indulgent, can not refuse anyone and throw the responsibility on others. Everything changes, has pain and swelling in a joint move to another. Labyrinthine abnormalities especially occur when looking up, he has no thirst, can to not drink water all day, has hemorrhoidal problems.

Subject V- GI treated with „Relaxirem Forte" (Remedia), male, 77 years

Elderly man is suffering of insomnia and hypertension. The hypertension is treated .This man has

Parameters	Subject I	Subject II	Subject III	Subject IV
Latency	30 min	30 min	30 min	45 min
Number of nocturnal awakenings	0	0	0	0
Residual sleepiness	Absent	Absent	Absent	Absent
Sleep duration	9 hours	10 hours	8 hours	7 hours

some of the specific characteristics of functional type *Pulsatilla*. He is listener type, sympathetic to the problems of others. It is demanding and meticulous, wanting everything to be perfect. He does not tolerate cold, but the heat sometimes has the feeling of cold water poured back and presents frequently digestive disorders.

Subject VI- DR treated with „Relaxirem Forte" (Remedia), male, 25 years

It is a young man with pale skin, green eyes and blond hair. He has a gentle nature and is a gracious guy, very sensitive. He is very meticulous and demanding to profession. To attract the attention of others is manipulative. Physical characteristics are: dyspnea and palpitation, accompanied by unilateral nasal obstruction, when lying down at night or after colds, emotions or heat.

Subiectul VII- VM treated with „Relaxirem Forte" (Remedia), female, 65 years

It is represented by an elderly woman with light skin, blue eyes and blond hair. It is a gentle woman, kind, but sad, cry easily. She is obedient and very sympathetic to the problems of others. She is afraid of tight spots and dark, with unilateral headaches all the time especially on the right and has chronic nasal catarrh.

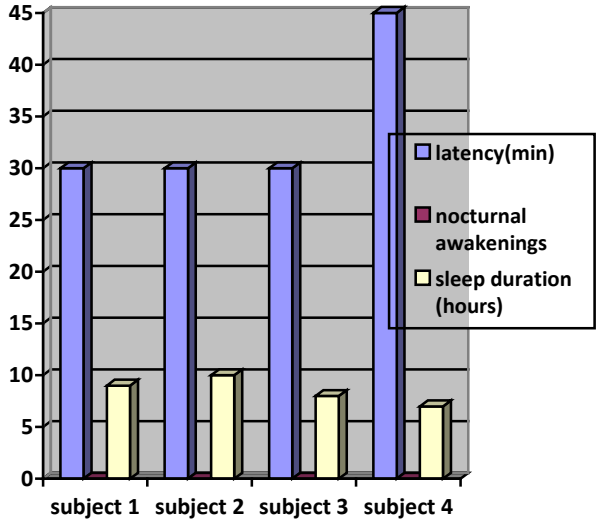
Subiecul VIII- HM treated with „Relaxirem Forte" (Remedia), female, 23 years

The latter of the subjects is a young, blond woman with blue eyes, sweet, kind, ever ready to sacrifice for the sake of others. She accuses the suspicious people around her that they are all enemies. As physical characterstics are: suffering from urinary tract and kidney infections, irregular periods and chronic allergic conjunctivitis.

RESULTS AND DISCUSSIONS

Tab. 1 Parameters observed at subjects treated with „Passiflora" tablets:

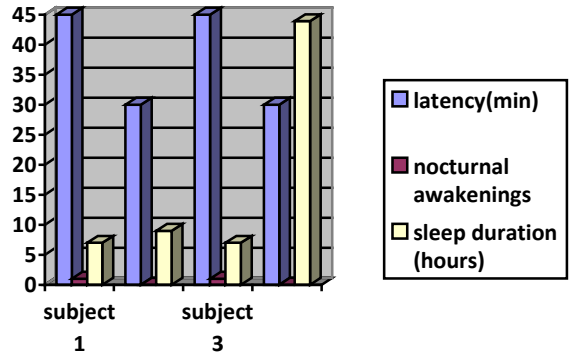
Fig. 1 Diagram of subjects treated with „Passiflora"(Hofigal):



Tab. 2 Parameters observed at subjects treated with „Relaxirem Forte" tablets:

Parameters	Subject I	Subject II	Subject III	Subject IV
Latency	45 min	30 min	45 min	30 min
Number of nocturnal awakenings	1	0	1	0
Residual sleepiness	Absent	Absent	Absent	Absent
Sleep duration	7 hours	9 hours	7 hours	8 hours

Fig. 2 Diagram of subjects treated with „Relaxirem forte"(Remedia):



In all patients sleep was long-lasting, soothing, without nightmares, just one awakening in elderly subjects, with mild morning awakening without residual drowsiness. Another important aspect of treatment with these plant products is that it does not interact with the treatment of subjects having chronic conditions. The first is a young subject with the characteristics of *Pulsatilla* and results were very good, the effect was obseved after 30 minutes of ingestion with good absorption and metabolism . The pacient has not awakened during the night and sleep was restful with an average of 9 hours per night.

The second patient treated with PASIFLORA tablets is also a young woman belonging pulsatile profile and reacted equally well with a peaceful sleep on average of 10 hours installed at half hour after ingesting the tablets.

The third subject is a young man showing a part of pulsatile characteristics and thus reacted very well during the two weeks of the study. Sleep quality was with no nighttime awakenings and no residual drowsiness the next day, at wake up.

The fourth patient is a man aged 49 years who responded well to treatment, but with a slower absorption. The latency was 45 minutes. The sleep was without awakening, without residual sleepiness and lasted 7 hours.

In patients treated with " Relaxirem forte " (Remedia Laboratories) were observed equally good results although two subjects are older.

First of subjects treated with " Relaxirem forte " (Remedia Laboratories) is a man aged 77 years, who is sleep was restful with one awakening, without residual drowsiness the next morning, did not produce reactions with antihypertensive medication .

The sixth subject is a young man who has responded well to treatment with good absorption and metabolism. He has a restful sleep on average 9 hours per night without waking during the night.

The seventh of patients is a woman aged 65 years with good response to treatment, and the latter of the subjects is a young woman of 23 years who in turn responded well treatment.

In this study the following results were observed (tab. 3).

Tab.3 The percentage of subjects and the sleep duration

Sleep duration	Percentage (%) of subjects
10 hours	12.5
9 hours	25
8 hours	25

7 hours	37.5

CONCLUSIONS

Practically, the study conducted in this paper comes to reinforce the idea that the treatments with herbal products give great results, are becoming increasingly popular and used as a therapeutic alternative to synthetic products.

Through this study we demonstrated that in the treatment of insomnia with Passiflora species is important to select patients according to constitutional type. It can be seen good results for patients enrolled in constitutional type *Pulsatilla*, which responded well to this treatment of insomnia.

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