HEREDITARY RESTLESS LEG SYNDROME: HOMEMADE TREATMENTS

[1]ZAHRA ALIBABAEI, [2]MOHSEN NAJAFI, [3]ARDESHIR HESAMPOUR, [4]BABAK AREFNEJAD, [5]S.M.M.HAMDI, [6]JAVAD SETAREH, [7]HAMED HOSEININASAB

[1]M.ScStudent in Genetics, Department of Biology,Islamic Azad University,Central Branch,Tehran.
[2]Faculty of Medical Sciences, Department of Medical Genetics, Islamic Azad University, Sari Branch, Sari, Iran
[3]Department of Biology Islamic Azad University Central Tehran Branch,Tehran.
[4]Omics Research Group, Tehran, Iran
[5]Department Of Biology,Islamic Azad University, Central Branch,Tehran.
[6]Research Center for Psychiatry and Behavior Sciences, Mazandaran University of Medical Sciences.
[7]IT engineer: Mr. hamed hoseininasab
E-mail: zahra.alibabaei74@yahoo.com

Restless legs syndrome (RLS) is a Nervous system disorders, which is recognized by the unpleasant feelings and continuous movements of the legs. This syndrome is one of the most common sleep disorders that affects about 3 to 15 percent of the general population, and about 2-3 percent of people with clinical signs are visible. The incidence of this disease in women is higher than in men. Precise statistics on the outbreak in Iran are(is) not available, but on average 15% of the patients have mild to severe symptoms. In this article (research), the effect of three non-drug therapies including using hot water bag, massage therapy with glycerin oil and oral consumption of herb extracts in patients with restless leg syndrome, which were simultaneously treated with dialysis, were (was) studied. Is(???). Although these methods require more extensive studies and experiments, but with positive results, they can be used as home-based and person-to-person therapies and can help to improve the symptoms of restless leg syndrome in patients.

Key words - Restless Legs Syndrome - Non-Drug Therapies - Hot Water Bags - Massage Therapy - Glycerin Oil - Hypericumperforatum

I. INTRODUCTION

Restless Legs Syndrome (RLS), also known as the Willis-Ekbum syndrome, is a Common Neural Disease that usually occurs at night with an unpleasant feeling in the legs, burning and itching. The need for movement and the unpleasant sensation of the legs are usually improved by shaking them. In 20% of patients, symptoms can also include the arm and other parts of the body, which often occur in a more severe type of disease. Diagnosis is based on clinical symptoms. RLS is often characterized by non-permanent movements and jumps in the lower extremity muscles, especially the legs, which is characterized by the general name of PLM (references) . PLM is a duplicate movement that affects the thigh, knees and legs. The prevalence of RLS in the general population is about 3-15%, and about 2-3% of them suffer from visible clinical symptoms (which occur twice a week, with moderate to severe severity) (reference). It has been observed that as the age increases, the prevalence of this disease increases and is higher in women than men (reference). In this article, we present our observations on the research done (conducted) on the effects of non-Drug therapies on the improvement of symptoms of restless leg syndrome in Iranian patients.

II. MATERIALS AND METHODS

This is an experimental study that was carried out on patients referred to 3 hospitals in Yazd, dialysis patients with RLS in Kashan Hospital and patients with RLS in hemodialysis patients in three hospitals in Tehran, which totaled 290 patients with RLS randomly assigned between 2014 and 2016. In these studiescurrent study, patients with symptoms of RLS were selected randomly from among those referring to the dialysis department by simple random sampling. The intensity of the symptoms of restless leg syndrome, before and after the use of all three hot water bags, massage with Glycerin Oil and oral use of hypericumperforatum extracts were completed by samplessubjects. Data wereanalyzed by SPSS software using descriptive statistics and paired t-test at a significant level of $p < 0.05$.

III. DISCUSSION

A) Warm water bag

One of the most effective methods for improving symptoms of restless leg syndrome is the use of heat therapy. One of the common remedies for relieving muscle and skeletal pain is the use of a warm water bag. The use of wet heat is much more effective than dry heat, because water transfer is much faster than air transfer. Therapeutic Therapy increases the skin's temperature and enhances circulation in the area and provides the nutrients that are needed, which is effective in the treatment process and helps improve symptoms. The main effect of heat therapy on muscle and soft tissues. Therapy reduces the acute and chronic muscle spasm and, by maintaining thermal energy through conduction and dilation of the

arteries, increases the oxygen, nutrients and blood leukocytes in tissues and stimulates heat receptors in the skin and deeper tissues.

In the first study, conducted in 2006 in dialysis department of Yazd Hospital,40 patients, 64% of whom were over the age of 60, were randomly selected. In this study, subjects were divided into 5 groups includingwithout difficulty, mild, moderate, severe and very severe. Intervention continued for 4 weeks and 3 sessions per week and 12 sessions of warm-up therapy with warm water bag. In each session, hot water bags with a mean temperature of 42 ° C were placed under the legs of the patient for 20 minutes. After the end of the study period, the information obtained was analyzed using the SPSS software. The findings of the study showed that the number of people with a moderate type of syndrome decreased from 69.5% before the study to 22% at the end of the study (Table 1).

Table 1. Distribution of the severity of restless leg syndrome before and after using the hot water bag.

After using warm water bag	Befor using warm water bag	RLS
Number(percent)	Number(percent)	Severity
12(33)	2(5.5)	Mild
22(61)	25(69.5)	medium
2(6)	9(25)	Intense

Mild: 1-10 medium: 11-20

intens: 21-30

Also, the mean of the restless leg syndrome after the warm water bag (11.25 ± 3.13) was lower than before the use of the hot water bag (19.53 ± 3.68) and paired t- test also showed a significant difference as well. was also significantly different Showed (p = 0/000)

The difference between this study and the study done by Russell and colleagues in 2007 under the name Massage Therapy was that using the hot water bag here, the effect of massage therapy on restless leg syndrome was 30% higher than The effect of massage alone has been taken by the group Russell and his colleagues. Because (Since) heat and hot water increase the flexibility of softened tissues, it also helps improve their function by improving the smooth muscle contraction.

B) Massage therapy using glycerin

Massage therapy has long been an effective way to reduce muscle aches. The history of using massage therapy dates back to ancient Greece. Recognizing the benefits of body massage with oils, the Greeks improved the elasticity of the skin and accelerated blood flow to the muscles. Due to the serious side effects of dopaminergic drugs currently used as the only drug treatment to control symptoms of restless leg syndrome in patients, today, non-pharmacological and complementary therapies are being considered for the treatment of this disease. One of the non-pharmacological methods is massage therapy, which attracts the attention of many researchers and physicians. Massage therapy using oils or oily compounds to improve blood circulation and increase muscle flexibility is suggested as an appropriate substitute for drug treatments. In addition to improving blood flow in the muscles and increasing oxygenation, increasing the secretion of analgesic agents Endrophin and Anaclamin help to relieve muscle and reduce tension in them.

In the second study, which was conducted at a hospital in Qom in 2014, 35 patients with restless leg syndrome plus 35 controlssubjects as a control group, with total 70 patients were randomly divided into intervention and control groups. The mean age of the intervention group was 53 years and the mean age The control group was 56 years old. The intervention group was treated with glycerin oil massage for 3 weeks, 2 times a week and 10 minutes from under the knee to the foot of the foot, by nurses trained. Massage was performed using glycerin oil at a rate of 60-30 ml, based on the size of the subjects to a level that covers both surfaces. The control group was under normal care. At the end of the study, the data were analyzed by SPSS software. The results of the research showed a significant difference in the severity of symptoms of restless leg syndrome before and after the massage therapy period T test showed a significant difference in the severity of restless leg syndrome before the study (24.09 ± 5.34) and after the study (4.64 / 5.94) in the intervention group with glycerin oil massage (p = 0.0001). However, in the control group, the severity of restless leg syndrome was not significantly different before the study (22.9 ± 4.38) and after the study (23.23 ± 4.52) ,(Table 2).

Table 2. Comparison of mean scores and standard deviation of the severity of restless leg syndrome in patients in both intervention and control groups before and after study

Significant degree	The end of the study	Start studying	
	Standard deviation≠Average	Standard deviation≠Average	RLS syndrom
P**=0.0001	9.54#4.64	24.09#5.34	Intervention group
P**=0.4	23.23#4.52	22.9#4.38	Control group
	P*=0.0001	P*=0.34	Comparison

*:Independent test**: Paired test

According to the above table, it can be concluded that massage therapy using glycerin oil reduces symptoms of restless leg syndrome in patients. In another study that has not yet been published, due to the lavender sedation properties, the use of this oil in foot massage

has a significant effect on the reduction of symptoms in the affected patients. It seems that conducting massage, of course, with basic and scientific methods, along with oil, in order to make muscles more flexible, due to lack of chemical effects, such as what is seen in prescription drugs, and the availability and ease of massage therapy, can The title of a complementary approach to treatment of symptoms in patients with restless leg syndrome should be considered.

C.Herbal medicine named hypericum perforatum

The use of herbal medicines has been very much considered today. Many complications and, in some cases, dangerous chemicals, have led many researchers to use medicinal herbs in the treatment of diseases, and many researchers around the world are now investigating various herbaceous species. Although no report has yet been reported registeredabout the effect of a specific herbal medicine on restless leg syndrome, the research suggests that due to the effect of the herbaceous plant of Hypericumperforatum on anxiety and mood disorders, it can improve the symptoms of restless legs syndrome Be

In the third??? study, which was carried out at the selected hospitals in Tehran in 1394, the effect of herbal extracts consumption on hemodialysis patients with restless leg syndrome was confirmed and approved. In this study, 180 patients were selected randomly and divided into intervention and control groups. The intervention group was treated for four months under the influence of receiving oral drops of grass tea (Hyperion brand-product of Avicenna Pharmaceuticals Company). The control group received a placebo instead of this drop. After four months, the results and information were analyzed and analyzed with the help of SPSSsoftware. The results showed that the patients in the intervention group who were in the severe group prior to study were in the middle group at the end of the study. While in the control group, no significant changes were made compared to the pre-study. (Table 3).

Table 3. Distribution of absolute and relative frequency of the units in the control and case before and after intervention

Test result	total		Intense		middle		Control group after intervention / Control group befor intervention
	percent	number	percent	number	percent	number	
P=0.25	3.3	3	0	0	3.3	3	Middle
	96.7	87	93.3	84	3.3	3	intense
	100	90	93.3	84	6.7	6	total
Test result	total		intense		Middle		Case group after intervention / Case group after intervention
	percent	number	percent	number	percent	number	
P<0.01	3.3	3	0	0	3.3	3	Middle
	96.7	87	1.1	1	95.6	86	Intense
	100	90	1.1	1	98.9	89	total

These results are based on a 2007 study by Jurassic and colleagues entitled "The Effectiveness of Hypericum Extract in Comparedcomparison to Paroxetine in the Treatment of Depressive Patients", the effect of herb drops on improving the symptoms of restless leg syndrome Approves. The results of the observation show that patients with severe type of restless leg syndrome were at moderate level after intervention, and those who had been studieddiagnosedwith moderate symptoms did not show any significant changes in the incidence of symptoms after the end of the study.

RESULTS: (جابجا DISCUSSION و RESULTجای ست)

According to the studies mentioned above, it can be said with certainty that the effect of non-drug therapies, such as the use of hot water and massage therapy on the reduction of symptoms of restless leg syndrome in patients, is significant and can be the source of further studies. Restless leg syndrome is one of the most important sleep disorders due to direct impact on sleep, life, daily functioning and mood. The use of the above methods can have a positive effect on reducing the suffering and suffering of affected patients and helping to improve Itshas symptoms and helps to return the person to thenormal life and improve the quality of life of patients. These methods can be considered as a suitable substitute for chemical drugs that have long-term irreparable complications for patients due to their lack of side effects and their examinations, like chemical drugs.

ACKNOWLEDGMENT

The authors would like to express their special thanks to staff of Tehran, Yazd and Kashan Universities of Medical Sciences, Islamic Azad University of Medical Sciences, Islamic Azad University central Tehran Branch and all the respected scientists for their kind help and support during the study.

REFRENCES

[1] Alidosti M, Hemate Z, Reisi M. Relationship between the quality of sleep and restless legs syndrome among. J KashanUniv Med Sci (Feyz) 2013; 17(1): (Persian).

[2] Antoniades J, Jones K, Hassed C, Piterman L. Sleep. Naturally: a review of the efficacy of herbal remedies for managing insomnia. Alternative and Complementary therapies 2012; 18(3): 136-

[3] Askenasy N and Askenasy J-J (2015) Restless Leg Syndrome in Neurologic and Medical Disorders. Sleep Medicine Clinics. 10 (3) 343-50.

[4] Centers for Disease Control and Prevention 2017 [Accessed March 9]. Available from: Chronic kidney disease surveillance system website. Available from: http://www.cdc.gov/ckd.

[5] Einollahi B and Izadianmehr N (2014) Restless Leg Syndrome: A Neglected Diagnosis. Nephrourol Mon. 6 (5) e22009.

[6] Giannaki C D, Hadjigeorgiou G M, Karatzaferi C, Pantzaris M C, Stefanidis I and Sakkas G K (2014) Epidemiology, impact, and treatment options of restless legs syndrome in end-stage renal disease patients: an evidence-based review. Kidney international. 85 (6) 1275-82.

[7] HasheminasabZaware R, MahmoodiMeymand M H, Rezaeian M, MohammadiKamalabadi N, Mostafavi S-A, AbdolkarimiDawarani M A, JomeYazdian R and Bidaki R (2016) Insomnia and Restless Leg Syndrome in Patients Undergoing Chronic Hemodialysis in Rafsanjan Ali IbnAbitaleb Hospital. Nephro-urology Monthly. 8 (1) e29527

[8] Jurcic J, Pereira J A and Kavanaugh D (2007) St John's wort versus paroxetine for depression. Canadian Family Physician. 53 (9) 1511-3.

[9] Kheirkhah M, Hamzi S, Vahedi M, Sadeghi-Aval-Shahr H. Effect of hypericumperforatum oral capsule on sleep problems during menopause. Complementary Medicine Journal of faculty of Nursing and Midwifery 2014; 4(3): 935-43. [Persian]

[10] Khojandi S, Shahgholian N, Karimian J, Valiani M. Comparison the effect of two methods of reflexology massage and stretching exercises on the severity of restless leg syndrome among patients undergoing hemodialysis. Iranian Journal of Nursing Research (IJNR) 2015; 10(1): (Persian).

[11] Klingelhoefer L, Cova I, Gupta S, Chaudhuri KR. A review of current treatment strategies for restless legs syndrome (Willis–Ekbom disease). ClinMed(Lond) 2014; 14(5): 520-524.

[12] Levy J (2016) Oxford handbook of dialysis. 4th edition. Oxford, Oxford University Press.

[13] Levy J, Brown E, Lawrence A. Oxford handbook of dialysis. 4th ed. London: Oxford University Press; 2016 Vassalotti JA, Centor R, Turner BJ, Greer RC, Choi M, Sequist TD. Practical approach to detection and management of chronic kidney disease for the primary care clinician. American Journal of Medicine 2016; 129(2): 153-62.

[14] Mir-Heydar H (2011) [Maarefgiyahi-karbordgiyahandarpishgirivadarmanbimariha]. Tehran, FarhangEslami Press. (Persian)

[15] MohaddesArdabili F, Abdi S, NajafiGhezeljeh T, Hoseini AF, Teimoori A. Evaluation of the effect of patient-selected music on sleep quality and pain intensity in burn patients. Medical - Surgical Nursing Journal 2016; 5(2): 32-40. [Persian]

[16] Mohammadi-Fakhar F, Rafii F, Jamshidi-Orak R, Inanloo M. Effect of jaw relaxation on pain intensity of burn dressing. Iranian Journal of Nursing Research 2010; 5(19): 58-67. [Persian]

[17] Mohseni M, Malekshahi F, Hadian B, EbrahimZadeh F. A comparison between the effects of topical piroxicam and EMLA cream on fistula cannulation pain in hemodialysis patient. Yafteh 2014; 16(4): 100-109 (Persian).

[18] Mozafarian V (2011) [Understanding of medicinal and aromatic plants of iran]. Tehran, FarhangMoaser Press. (Persian)

[19] National Institutes of Health. 2016 USRDS Annual Data Report: Epidemiology of Kidney Disease in the United States. Bethesda, MD: National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 2016.Potter P, Perry A. Basic nursing: a critical thinking approach, 50th ed, Philadlphia, Mosby Co 2001: 1228-40.

[20] Partinen M, Hirvonen K, Jama L Alakuijala A, Hublin C, Tamminen I, et al. Open label study of long- term efficacy and safety of pramipexole in patients with restless leg syndrome. Sleep Med 2008; 9(5): 537-541.

[21] Pereira Jr J C, Pradella-Hallinan M and Alves R C (2013) Saint John's wort, an herbal inducer of the cytochrome P4503A4 isoform, may alleviate symptoms of Willis-Ekbom's disease. Clinics. 68 (4) 469-74.

[22] Perry AG, Potter PA, Ostendorf W. Clinical nursing skills & techniques. 8th ed. Mosby: St Louis; 2006.

[23] Poursina Pharmacy (2015) [Pharmaceutical Brochure]. Tehran, Poursina Pharmacy. [Persian)

[24] Rajabfardi Z, Hatami H, Khodakarim S, Khazaei S. Zobdeh Z, Khazaei Z. Factors associated with end stage renal disease among hemodialysis patients in Tuyserkan City in 2013. Pajouhan Scientific Journal 2015; 13(1): 33-41 (Persian)

[25] Salahuddin M, Maru TT, Kumalo A, Pandi-Perumal SR, Bahammam AS, Manzar D. Validation of the pittsburgh sleep quality index in community dwelling ethiopian adults. Health and Quality of Life Outcomes 2017; 15(58): 2-7

[26] Tarsy D, Silber MH, Hurtig HI, Avidan AY, Eichler AF. Treatment of restless legs syndrome in adults. Avalable From: www. uptodate.com/.../treatment-of-restless-legs-syndrome-willis-ekbom. Accessed May 2, 2015.

[27] Vassalotti J A, Centor R, Turner B J, Greer R C, Choi M and Sequist T D (2016) Practical approach to detection and management of chronic kidney disease for the primary care clinician. The American Journal of Medicine. 129 (2) 153-62. e7.

[28] Yeh P, Walters A S and Tsuang J W (2012) Restless legs syndrome: a comprehensive overview on its epidemiology, risk factors, and treatment. Sleep and Breathing. 16 (4) 987-1007.

[29] Zargari A (2013) [Medicinal Plants]. Tehran, University of Tehran. (Persian)

[30] Zobeiri M and Shokoohi A (2014) Restless leg syndrome in diabetics compared with normal controls. Sleep Disorders. 2014 1-4. 96

★★★