

THE USAGE OF PHARMACOPUNCTURE IN MEDICAL COMPLEXES FOR LUMBOSACRAL DORSOPATHIES

Agasarov L.G.^{1, 2}

¹ National Medical Research Centre for Rehabilitation and Balneology of the Ministry of HealthCare of Russia, Moscow, Russian Federation

² Sechenov First Moscow State Medical University of the Ministry of HealthCare of Russia (Sechenov University), Moscow, Russian Federation

SUMMARY

The material is devoted to the results of a number of own studies in the field of local drug stimulation (pharmacopuncture) – a technique for irritating reflexology points with small doses of drugs. In this respect, the topic being developed fits well into the general course of the problem of low-energy therapeutic effects, interest in which has only increased recently. In the mechanisms of technology, the role of prolongation of the reflex response and the formation of the depot of the drug used is distinguished. However, the issues of summation and, moreover, potentiation of these influences remain unclear, which determined the implementation of a series of works. The object of observation was lumbosacral dorsopathy, since the bulk of research on local stimulation is devoted to the correction of these conditions. Naturally, the enduring medical, social and economic significance of the problem of dorsopathies was taken into account. In the work performed, the mechanisms and effectiveness of pharmacopuncture with Alflutop, shown in the pathology under study, were analyzed. The evaluation of the effectiveness of the method included in the complex therapy programs was based on taking into account the dynamics of clinical and additional (psychological, electrophysiological) characteristics of the patient's condition. At the same time, the addition of the reflex and drug links of the method was confirmed, which determines its significant superiority over the compared methods. In this regard, the structural-modifying effect in the form of shifts in the state of the intervertebral discs, observed in the course of the combined application of the selected technology and electromagnet stimulation, was of fundamental importance. In addition, within the framework of the affected direction, an effective scheme of exposure was proposed, combining the techniques of drug blockade according to the method of A.V. Vishnevsky and pharmacopuncture with Alflutop.

KEYWORDS: lumbosacral dorsopathies, reflexology, reflexology points, pharmacopuncture, local stimulation, blockade according to the Vishnevsky method of the drug, Alflutop.

CONFLICT OF INTEREST. The authors declare no conflict of interest.

ПРИМЕНЕНИЕ ФАРМАКОПУНКТУРЫ В КОМПЛЕКСНОМ ЛЕЧЕНИИ ПРИ ПОЯСНИЧНО-КРЕСТЦОВЫХ ДОРСОПАТИЯХ

Агасаров Л.Г.^{1, 2}

¹ ФГАОУ ВО «Первый Московский государственный медицинский университет им. Сеченова Минздрава России (Сеченовский университет), Москва, Российская Федерация

² ФГБУ «Национальный медицинский исследовательский центр реабилитации и курортологии» Минздрава России, Москва, Российская Федерация

РЕЗЮМЕ

Статья обобщает результаты собственных исследований в области одного из направлений рефлексотерапии – фармакопунктуры или, иначе, локальной стимуляции. Под этим термином в нашем случае подразумевается способ раздражения точек рефлексотерапии малыми дозами лекарственных средств, рассматриваемых в качестве факторов низкоэнергетического воздействия. Синонимами метода, отражающими мало существенные различия, являются «биопунктура», «мезотерапия» и некоторые другие. В механизмах технологии выделяют значимость пролонгации рефлекторного ответа вследствие изменения объема тканей в области активируемых точек и формирования множественных депо используемого препарата. Однако вопросы более тонких звеньев остаются до конца не ясными, что и определило цель работы – выявление как такового целенаправленного действия медикаментов, используемых путем локальной стимуляции. В качестве исследовательской «модели» были выбраны пояснично-крестцовые дорсопатии, что в известной степени связано со становлением рефлексотерапии в стране, способы которой оттачивались на «модели» неврологических болевых синдромов. Естественно, учитывали медико-социальную и экономическую значимость проблемы. В серии выполненных диссертационных работ наших сотрудников проанализированы терапевтические возможности локального применения препарата Алфлутоп, прямо показанного при изучаемой патологии. Оценка эффективности данного подхода базировалась на учете динамики клинических и дополнительных характеристик и, в частности, результатах психологического и электрофизиологического обследования, включая зональную термографию, «сосудистые» пробы и др.

При этом отмечено сложение и даже потенцирование рефлекторного и медикаментозного звеньев способа, определяющее достоверное превосходство над стандартным лечебным воздействием или плацебо-контролем. Принципиально значимым в этом плане явился структурно-модифицирующий эффект применительно к состоянию межпозвонковых дисков, подтвержденный данными ультразвуковой видео денситометрии. Внимания заслуживает и факт усиления результативности фармакопунктуры за счет параллельного использования современной аппаратной техники – низкочастотной электромагнитной стимуляции. Представленные материалы также отражены в монографиях, ряде методических пособий и защищенных патентах на изобретение.

КЛЮЧЕВЫЕ СЛОВА: пояснично-крестцовые дорсопатии, рефлексотерапия, точки рефлексотерапии, фармакопунктура, локальная стимуляция, препарат Афлутоп.

КОНФЛИКТ ИНТЕРЕСОВ. Авторы заявляют об отсутствии конфликта интересов.

Introduction

The article is devoted to the generalization of the results of our own research in the field of pharmacopuncture – a method of local stimulation of reflexology points with small doses of drugs [1, 3, 10]. Synonyms of the method, reflecting little significant, mainly external differences, are “aquapuncture”, “biopuncture”, “mesotherapy” and some others. In Russia, the method, officially included in the arsenal of a reflexologist, is consistently spelled out in a number of documents reflecting the stages of the formation of the discipline: the Unified Curriculum (1999), the State Educational Standard (2000) and, accordingly, the List of Knowledge and Skills of a Specialist. In the following decades, there were no special additions to these documents, with the exception of the order of the Ministry of Health and Social Development No. 266 of 13.04.07 “On approval of recommended lists of medical indications and contraindications for the use of reflexology in clinical practice” and several later by-laws that confirmed the existing realities.

In order to ascertain the priority in the issue under discussion: in 2002, for the first time in the country, we presented a textbook for the system of higher and additional medical education “Pharmacopuncture” [1], and also developed and implemented a program of the same name for postgraduate training of specialists lasting 144 hours.

A series of own studies is devoted to this topic, revealing the mechanisms and effectiveness of point stimulation with dorsopathies at the lumbosacral level. The choice of this pathology is to a certain extent associated with the formation of reflexology in the country, the methods of which were largely honed on the “model” of neurological pain syndromes. Naturally, the medical, social and economic significance of the problem was taken into account: the widest coverage of the working-age population, almost at the level of a pandemic, the protracted course of the process and the severity of the consequences of dorsopathies, including the frequency of disability of patients [2, 8]. These characteristics determine the search and implementation of effective treatment complexes, part of which may be such a method of reflexology as local stimulation.

At the same time, they technically adhere to uniformity in the selection of points. So, in the case of lumbosacral dorsopathies of interest to us, two or three segmental points are chosen along the median and lateral lines of the back and five to six distant points in the region of the lower extremities, located mainly in the projection of pain. The manipulations them-

selves consist in subcutaneous and/or intradermal administration of the drug substance in a volume of 0.2–0.3 ml per locus.

There are several key points in the mechanisms of action of the method. First, they indicate a prolongation of the reflex response due to changes in the volumetric characteristics of tissues in the area of activated points. Secondly, they take into account the formation of multiple depots of drugs, which contributes to the strengthening of their influence. However, the issues of finer links, including the specificity of the action of medicines as such, remain unclear, giving the problem the character of a “black box”. For example, the comparability of therapeutic results in response to the introduction of the antioxidant Actovegin or an isotonic solution of sodium chloride into acupuncture points in tunnel neuropathy of the hands indicates, in fact, the prevalence of the reflex over the drug effect [9]. According to others, including our data [2], the use of pharmacopuncture in dorsopathies is accompanied by the summation of the therapeutic links of the method. This moment determined the purpose of research on the identification of the purposeful action of drugs during local stimulation as such. Work on the stated subject was carried out by using the drug Alflutop (Biotechnos, Romania), the choice of which was explained by such proven effects as analgesic, anti-inflammatory and chondroprotective.

In the dissertation research of O.A. Tikhaya (2007), patients with lumbosacral dorsopathy, with the dominance of the vascular component, were divided into three treatment groups. In addition to standard therapy, in the first two groups, the drug was administered intramuscularly: in the 1st independently, in the 2nd – in combination with classical acupuncture, i.e., in the form of a rather laborious and not fully justified complex. In the 3rd group, the basic treatment was supplemented with pharmacopuncture with this remedy. As a result, a significant advantage of both the proposed complex and the pharmacopuncture itself over the standard intramuscular use of the drug was established. Important here was the implementation in the case of pharmacopuncture of a qualitatively new, vascular effect, in principle uncharacteristic for the drug Alflutop itself. This effect, verified by the results of objective analysis, can be explained, first of all, by the significance of the reflex link of the technology [7].

In terms of further development of the information obtained, and, in general, increasing the effectiveness of the impact, our dissertator from Kazakhstan S.K. Makina (2014) proposed a combination of Alflutop pharmacopuncture and zonal low-frequency electromagnetic stimulation.

According to the design of the study, patients with exacerbation of lumbosacral dorsopathy were divided into four groups in which standard treatment was performed, and in the control group it was the main one. Along with it, electromagnetic therapy was used in the 1st group, pharmacopuncture with Alflutop in the 2nd group, and a combination of these two methods in the 3rd. The treatment course in all groups included 10 procedures carried out three times a week.

In the course of the study, it was demonstrated that the proposed injection-hardware complex provided a distinct improvement in a number of clinical and instrumental characteristics that significantly exceeded the indicators of the compared groups. Fundamentally significant in this regard was the structural-modifying effect in relation to the “weak link” – intervertebral discs, confirmed by the data of ultrasound video densitometry of these structures. In particular, the indicators reflecting the state of the nucleus pulposus and, accordingly, the integrative echographic coefficient of the disc underwent maximum positive changes only in the 3rd, main group. Attention should also be paid to the fact of enhancing the effectiveness of pharmacopuncture due to the parallel use of modern hardware technology [6].

The obtained data because of these two works form the basis of the patent for the invention “Method for treating patients with lumbosacral dorsopathy”, registered in 2021 and revealing the algorithm, safety and efficacy of injecting Alflutop into the area of reflexology points for this pathology.

In 2021, we proposed an original scheme of therapeutic effects for vertebrogenic syndromes, combining the techniques of blockade according to the Vishnevsky method and pharmacopuncture with Alflutop (L.G. Agasarov, E.S. Sahakyan, publications of 2020–2021). A total of 90 patients with exacerbation of dorsopathy at the lumbosacral level were divided into three groups, with conventional treatment as a baseline. The effect in the 1st group was limited to it, and in the other two, drug stimulation of a number of loci was additionally carried out. In particular, points were selected along the middle and lateral lines of the back (visually forming a semblance of an “anatomical lattice” from 12–14 injections performed) and the actual acupuncture points of the lower extremities. At the same time, Lidocaine was injected intradermal into the areola of the “lattice” at a dosage of 0.1 ml per locus, while various agents were injected subcutaneously into the projection of the points of the legs and feet: in the 2nd group – the drug Alflutop, the 3rd – saline, as a placebo. The volume of both substances was 0.2 ml per acupuncture point, and the treatment cycle itself consisted of 10 procedures performed every other day.

The reverse dynamics of the evaluated indicators testified to the advantage of both variants of local stimulation, confirmed by the improvement of the patient’s condition within 60% of cases – against 46.6% of cases in response

to only the generally accepted effect. In parallel with the reduction of neurological manifestations in the groups of pharmacopuncture (both true and false), there was a regression of pathological vascular reactions, confirmed by the data of thermo- and rheovasography and explained primarily by the positive role of the reflex link of the method. However, there were differences within these effective groups: with the overall comparability of the rate of pain reduction, their level at the end of therapy was significantly lower in the case of pharmacopuncture with Alflutop. These data were consistent with the tendency to normalize the mental background in patients of this particular group, indicating the reverse development of asthenic reactions, which, in turn, affect the level of pain perception.

The high efficacy noted in the 2nd group can be explained by the points of application of the drugs used in the study. In particular, segmental blockade with an anesthetic determines the achievement of a rapid analgesic effect, while pharmacopuncture with Alflutop (due to multi-purpose effect) provides the maximum final effectiveness [4, 5].

This information is reflected in the registered patent for the invention “Method for treating patients with lumbosacral dorsopathy using the method of local stimulation “Anatomical path” (2021).

Conclusion. Based on the results of the performed work, the clinical efficacy, therapeutic reliability and safety of pharmacopuncture performed by the selected drug were generally predictably confirmed. At the same time, the addition and even potentiation of the reflex and drug links of this method was noted, which determines a significant superiority over the standard exposure or placebo control. This fact to a certain extent testifies in favor of the purposeful influence of the medication used. Attention should also be paid to improving the effectiveness of pharmacopuncture through the additional use of modern hardware technology.

Reference

1. Agasarov L.G. Pharmacopuncture. – 3rd ed., rev. and add. – M., 2015. – 192 p.
2. Agasarov L.G. Reflexotherapy in common diseases of the nervous system. – M., 2017. – 240 p.
3. Agasarov L.G. Local injection therapy for muscular-articular pain syndrome. – Novosibirsk, 2020. – 48 p.
4. Agasarov L.G., Sahakyan E.S. Optimization of local medical stimulation in dorsopathy // Bulletin of new medical technologies. – 2021, No 2. – P. 89–92.
5. Agasarov L.G. Original method of local stimulation in lumbosacral dorsopathy // Medical alphabet. – 2022, No 21. – P. 7–10.
6. Makina S.K. The use of frequency-wave therapy in the complex of rehabilitation measures for lumbosacral dorsopathy: Avtoref. dis. ... cand. honey. sciences. – M., 2014. – 22 p.
7. Tikhaya O.A. Optimization of traditional technologies of restorative medicine: Avtoref. dis. ... cand. honey. sciences. – M., 2007. – 18 p.
8. Khadartsev A.A., Agasarov L.G. Non-drug treatment of dorsopathies (review of literature) // Bulletin of new medical technologies (electron edition). – 2020, No 1. – 18 p.
9. Chuzavkova E.A. Clinical and physiological substantiation of various variants of acupuncture in tunnel syndromes of the hands: Avtoref. dis. ... cand. honey. sciences. – M., 1996. – 20 p.
10. Agasarov L.G. Pharmacopuncture in Dorsopathy Treatment // J. of Acupuncture and Meridian Studies. – 2008, V. 1. – No 2. – P. 110–113.

INFORMATION ABOUT THE AUTHOR

Agasarov Lev Georgievich, MD, professor, Department of Restorative Medicine, Rehabilitation and Balneology of the First Moscow State Medical University named after Sechenov of the Ministry of Healthcare of the Russian Federation (Sechenov University), Moscow, Russian Federation; Chief Researcher of the Department of Physiotherapy and Reflexology of the Federal State Budgetary Institution “National medical research centre for rehabilitation and balneology” of the Ministry of Healthcare of the Russian Federation. E-mail: lev.agasarov@mail.ru. ORCID ID: <http://orcid.org/0000-0001-5218-1163>. Tel.: +7-916-438-48-77