

REVIEW ARTICLES

Echinacea compositum in the treatment of respiratory diseases

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Abstract

Background: Clinical protocols and standards of treatment of respiratory tract diseases include mainly antibacterial, mucolytic and anti-inflammatory therapy. This approach is effective at relieving acute symptoms, but there is a “flip side of the coin” – presence of side effects. So, antibiotics cause immunosuppression and dysbiosis, nephrotoxicity and hepatotoxicity. Nonsteroidal anti-inflammatory medicines have a negative effect on mucous membrane of stomach and kidneys. Mucolytics, beta-2-agonists increase blood pressure, cause heart rhythm disturbances. In case of a more long-term use of these medicines these problems become more relevant. Thus, there is a shortage of pathogenic anti-inflammatory therapy aimed at optimization of inflammation. In standards are absent also effective drainage and detoxification medicines and impossibility of their use in comorbidity, age-related limitations also complicates the treatment.

Conclusions: Echinacea compositum has a complex effect: detoxification, immunomodulatory, anti-inflammatory, etc. Medication is used in treatment of inflammatory and purulent processes of soft tissues and mucous membranes; its prescription does not require prior immunological examination. It has a favorable safety profile and is recommended for children from 1 year old, is well combined with any medicine, increases nonspecific protection, effectiveness of antibiotic therapy and course of treatment, reduction of its duration; enhances antifungal therapy and is used in the schemes of influenza prevention in children, the elderly, patients with tendency to allergic reactions.

Key words: Echinacea compositum, bioregulation, respiratory tract.

Introduction

Proportion of acute and chronic diseases of the upper and lower respiratory tract infections among all newly diagnosed diseases is 26% [2]. They significantly reduce quality of life of patients, are dangerous with high risk of chronicity and development of complications, especially metagrippal [1]. Here is presented the review of long-term foreign clinical experience of the use of complex bioregulation medication *Echinacea compositum* of German company "Biologishe Haylmittel Heel" for diseases of respiratory tract [4, 5, 6].

Clinical protocols and standards of treatment of respiratory tract diseases include mainly antibacterial, mucolytic and anti-inflammatory therapy. This approach is effective at relieving acute symptoms, but there is a "flip side of the coin" - presence of side effects. So, antibiotics cause immunosuppression and dysbiosis, nephrotoxicity and hepatotoxicity. Nonsteroidal anti-inflammatory medicines have a negative effect on mucous membrane of stomach and kidneys. Mucolytics, beta-2-agonists increase blood pressure, cause heart rhythm disturbances. In case of a more long-term use of these medicines these problems become more relevant. [3]

More and more often appears resistance of microorganisms to antimicrobial agents, and the growth of population sensitization limits possibilities to prescribe standard medicines [3]. Nonsteroidal anti-inflammatory medicines have mainly symptomatic effects on inflammatory process by blocking and suppressing it. Thus, there is a shortage of pathogenic anti-inflammatory therapy aimed at optimization of inflammation. In standards are absent also effective drainage and detoxification medicines and impossibility of their use in comorbidity, age-related limitations also complicates the treatment.

Discussion

In connection with it expansion of the use of pathogenetic bioregulation approaches and medications is important as it can improve both efficiency and profile of therapy safety. One of such approaches is bioregulation. It is carried out through the use of integrated bioregulation medicine. Earlier in the literature was used the term "antihomotoxic medications". Complex bioregulation medications contain ultralow doses of active substances, which contribute to the activation of drainage and detoxification processes, recovery of self-control processes in the body (acute inflammation and others.). Ultralow doses of complex bioregulation medication are not metabolized in the body and do not have pharmacokinetics. They do not require additional energy and do not have pharmacological load on the body [4, 5, 6].

Complex bioregulation medicine has a pronounced detoxification, immune-modulating and anti-inflammatory effect - *Echinacea compositum* (injectable solution). It is used in complex treatment of inflammatory and purulent processes of soft tissues and mucous membranes, and particularly in cases with severe intoxication and frequent recurrences [1, 2, 3, 9, 12, 14].

In the National Medical University (Kiev, Ukraine) S. A. Kramarev, L. A. Palatnaya, B. K. Shamugia [7] developed

methodical recommendations "Alternative methods of treatment and prevention of influenza and acute viral infections in children" where *Echinacea compositum* is regarded as a universal immunomodulator, which can be administered without prior immunological examination that essentially simplifies the work of family doctor.

In the Institute of Tuberculosis and Pulmonology of the National Academy of Medical Sciences of Ukraine V. P. Kostromina, L. B. Yaroshchuk [9] conducted an open, randomized research "Efficacy of antihomotoxic medications in the treatment of recurrent bronchitis in children infected with mycobacterium of tuberculosis". The efficiency of CBM *Echinacea compositum*, *Limfomiozot* (drainage medication, which improves lymph drainage) and 2 others were studied. The control group received standard therapy. The second, in addition *Limfomiozot* and *Mucosa compositum*. The third, only complex bioregulation medications: *Limfomiozot*, *Echinacea compositum*, *Mucosa compositum* and *Traumeel*.

Made conclusions: monotherapy with complex bioregulation medications / antihomotoxic medications in their effectiveness is not inferior to the standard scheme of therapy of recurrent bronchitis; complex bioregulation medications (antihomotoxic medications significantly reduce the level of endotoxemia) have a significant normalizing effect on the structure and function of mucous membranes of the respiratory and digestive tracts and state of microflora [9].

In the research of L. M. Senyuta, G. I. Mazuryak, A. L. Tsimbalist, S. S. Moldaver [10] "Therapeutic efficacy and tolerability of *Echinacea compositum* preparation, at various stages of treatment of severe pneumonia in infants", conducted on the basis of Regional Children Clinical Hospital in Ivano-Frankivsk city (Ukraine) were involved 46 children between the ages of 1 month to 1 year.

To the first group on the background of basic traditional therapy was prescribed CBP *Echinacea compositum*. Compared with control group (only basic therapy) the first group manifested a significant improvement of general state, reduction of the duration of intoxication, obstruction, fever, respiratory distress, more rapid normalization of blood formula and reduction of the duration of course of antibiotic therapy. Finally, have been made conclusions that parenteral use of *Echinacea compositum* in the treatment of acute viral and bacterial pneumonia enhances the effectiveness of antibiotic therapy and normalization of humoral response; it can be recommended for infants for pneumonia therapy, for prevention - to children from group at high risk of pneumonia development [10]. As a result, by the order No. 18 of January 13th, 2005 of the Ministry of Health of Ukraine, complex bioregulation medication *Echinacea compositum* is included in clinical protocol of the treatment of staphylococcal pneumonia in children [11].

In methodological recommendations "Principles of etiopathogenic therapy of acute pharyngitis", S. V. Ryzantsev and V. I. Kocherovets [12] characterized *Echinacea compositum* as "biological antibiotic" and noted its high efficacy against infectious processes of staphylococcal and streptococcal etiology.

Echinacea compositum greatly enhances antifungal therapy in composition of complex treatment of mycoses – methodological recommendations “Clinics and treatment of mycotic lesions of upper respiratory tract and ear”. At uncomplicated course of mycoses (invasive forms) complex bioregulation medications may be administered as monotherapy, and at presence of comorbidity - simultaneously with standard treatment of mycoses of upper respiratory tract and ear [13].

In the National Medical University (Kiev, Ukraine) P. F. Dudka, I. I. Saharchuk, R. I. Ilnitsky [14] developed methodological recommendations “Antihomotoxic medications in the treatment of chronic obstructive pulmonary disease”. In this case *Echinacea compositum* is recommended as a basic complex bioregulation medication in the scheme of chronic obstructive pulmonary disease treatment. Besides immunomodulatory action focus is made on its strong anti-inflammatory, indirect antimicrobial, detoxification and drainage action.

Conclusions

The use of complex bioregulation medications is pathogenetically substantiated method of chronic obstructive pulmonary disease treatment. Both in exacerbation and steady state of patient, they enhance clinical efficacy of chronic obstructive pulmonary disease treatment, reduce the dosage of antibiotics, bronchodilators, inhaled corticosteroids and lower incidence of their side effects; in case of non-severe exacerbation of chronic obstructive pulmonary disease, caused by respiratory viruses, it is possible only the use of complex bioregulation medications/ antihomotoxic medications.

Echinacea compositum has a complex effect: detoxification, immunomodulatory, anti-inflammatory, etc. Medication is used in treatment of inflammatory and purulent processes of soft tissues and mucous membranes; its prescription does not require prior immunological examination. It has a favorable safety profile and is recommended for children from 1 year old, is well combined with any medicine, increases nonspecific protection, effectiveness of antibiotic therapy and course of treatment, reduction of its duration; enhances antifungal therapy and is used in the schemes of influenza prevention in children, the elderly, patients with tendency to allergic reactions.

References

1. Peresadin NA, Dyachenko TV. Kompleksnoye lecheniye i reabilitatsiya patsientov s khronicheskimi zabolevaniyami LOR-organov i dykhatel'noy sistemy: sovremennyye metodologicheskie aspekty ispolzovaniya antigomotoksicheskikh sredstv u chasto boleyushchikh lits [Complex treatment and rehabilitation of patients with chronic diseases of ENT-organs and respiratory system: modern methodological aspects of the use of antihomotoxic medicines in case of often ill persons. *Biologicheskaya terapiya* [Biological therapy]. 2004;1:24-27.
2. Kostromina VP, Yaroshchuk LB. Zabolevaniya organov dykhaniya: vzglyad na problemu s tochki zreniya gomotoksikologii i vozmozhnosti antigomotoksicheskoy terapii v lechenii zabolevaniy dykhatel'noy sistemy [Diseases of respiratory organs: a look at the problem from the point of view of homotoxicology and possibilities of antihomotoxic therapy in the treatment of respiratory system diseases]. *Ukrainskyi terapevtichny zhurnal* [Ukrainian therapeutic magazine]. 2006;1:71-74.
3. Mulyar LA. Primeneniye bioregulyatornykh podkhodov v terapii khronicheskikh nespetsificheskikh zabolevaniy legkikh [Application of bioregulatory approaches in therapy of chronic nonspecific pulmonary diseases]. *Biologicheskaya terapiya* [Biological therapy]. 2012;2:14-18.
4. Klimenko VG. Osnovnye polozheniya patogeneticheskogo bioregulyatsionnogo podkhoda v obshchey terapevticheskoy praktike [Main provisions of pathogenetic bioregulation approach in general therapeutic practice]. *Biologicheskaya terapiya* [Biological therapy]. 2013;1:8-11.
5. Khayne Khartmut. Znacheniyе antigomotoksicheskoy terapii v regul'yatornoy meditsine [Value of antihomotoxic therapy in regulatory medicine]. *Biologicheskaya meditsina* [Biological medicine]. 2004;2:4-9.
6. Van Brandt B, Khayne Khartmut. Regulyatornaya blokada: opredeleniye, znacheniyе i terapiya [Regulatory blockade: definition, meaning and treatment]. *Biologicheskaya meditsina* [Biological medicine]. 2006;2:4-5.
7. Kramarev SA, Palatnaya LA, Shamugiya BK. Alternativnyye metody lecheniya i profilaktiki grippa i ORVI u detey. Metodrekomendatsii MZ Ukrainy [Alternative methods of treatment and prevention of influenza and acute respiratory viral infections in children. Methodological recommendations MH of Ukraine]. 2006;37.
8. Garnik TP, Kozimenko TM, Bilousova IV, i dr. Metody narodnoy meditsiny v preventivnoy, reabilitatsionnoy i kompleksnoy terapii bolnykh grippom i ORVI [Methods of traditional medicine in prevention, rehabilitation and treatment of patients with influenza and acute respiratory viral infections]. *Metodrekomendatsii MZ Ukrainy* [Methodological recommendations MH of Ukraine]. 2009;32.
9. Kostromina VP, Yaroshchuk LB. Effektivnost primeneniya antigomotoksicheskikh preparatov v lechenii retsidiviruyushchego bronkhita u detey, infitsirovannykh mikobakteriyami tuberkuleza [Efficacy of the use of antihomotoxic medications in the treatment of recurrent bronchitis in children infected with mycobacterium of tuberculosis]. *Biologicheskaya terapiya* [Biological therapy]. 2005;3:21-28.
10. Senyuta LM, Mazuryak GI, Tsimbalista AL, Moldaver SS. Terapevtichna yefektivnist i perenosimist preparatu *Echinacea compositum* S na riznikh yetapakh likuvannya gastroi pnevmonii u nemovlyat [Therapeutic efficacy and tolerability of *Echinacea compositum* S at various stages of treatment of acute pneumonia in infants]. *Biologicheskaya terapiya* [Biological therapy]. 2002;1:8-12.
11. Pashchenko VN. Dokazatel'naya meditsina i antigomotoksicheskaya terapiya [Evidence-based medicine and antihomotoxic therapy]. *Biologicheskaya terapiya* [Biological therapy]. 2010;2:4-5.
12. Ryazantsev SV, Kocherovets VI. Printsipy etiopatogeneticheskoy terapii ostrykh faringitov [Principles of etiopathogenic therapy of acute pharyngitis]. *Metodrekomendatsii MZ RF* [Methodological recommendations MH RF]. 2007;40.
13. Zabolotny DI, Ryazantsev SV. Klinika i lecheniye mikoticheskikh porazheniy verkhnikh dykhatel'nykh putey i ukha [Clinics and treatment of mycotic lesions of the upper respiratory tract and ear]. *Metodrekomendatsii MZ RF* [Methodological recommendations MH RF]. 2004;32.
14. Dudka PF, Sakharchuk II, Ilnitsky RI. Antigomotoksicheskiye preparaty v lechenii khronicheskogo obstruktivnogo zabolevaniya legkikh [Antihomotoxic medications in the treatment of chronic obstructive pulmonary disease]. *Metodrekomendatsii MZ Ukrainy* [Methodological recommendations MH of Ukraine]. 2006;33.