

## REVIEW ARTICLES

### Engystol – possibility of bioregulation approach in viral diseases

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#### Abstract

**Background:** Acute viral infections due to widespread, high contagiousness and rapid development of viruses resistance to used drugs (medicines) is one of the greatest challenges of modern medicine. Therefore, the search for new approaches and methods for treatment and prevention of viral etiology is very relevant. The aim of this article was to review one such approach called bio-regulatory, which allows us to solve the above problem. It is carried out through the use of complex bio-regulatory medications. In this article was reviewed complex bio-regulatory medications for viral diseases – Engystol, it is antiviral immunomodulator of German pharmaceutical company “Biologische Heilmittel Heel GmbH” which is widely used in a variety of viral diseases in case of children and adults thanks to its favorable safety profile and proven efficacy.

**Conclusions:** National and foreign doctors in case of many viral diseases have experience of successful long-term use of complex bio-regulatory medications Engystol. Results of scientific and clinical studies show that Engystol is universal antiviral immune-modulator with proven efficacy in a wide range of viral diseases in children and adults. It has a high safety profile. It is used both independently and as part of complex treatment regimens. It goes well with any medicines, reducing their side effects on the body.

**Key words:** Engystol, bio-regulatory medications.

#### Introduction

According to statistics, most people at least once during the year suffer of acute respiratory viral infections (ARVI). But incidence of ARVI in paediatric population varies, according to data of the World Health Organization, from 5 up to 12 episodes per year that is more than 2.5-4 times higher than among adults. Because of the absence of specific immunity in human, respiratory viruses spread rapidly in population, causing not only increased morbidity, often with complicated course, but also lead to huge economic costs [1, 2, 3].

The so-called childhood diseases (measles, varicella, epidemic parotitis, etc.) besides high contagiousness, in case of incorrect treatment are dangerous with their complications [4, 5, 6].

Current approaches to treatment and prevention of ARVI and other viral infections are imperfect: patients receive a large amount of medicines, mainly symptomatic, which often cause side effects. Widely used today antiviral agents often do not provide sufficient effect, since there is a rapid development of resistance of viruses to used medicines [7, 8]. Also, there are difficulties due to age restrictions, inability to use medicines at various concomitant pathologies, pregnancy, lactation, early childhood.

In this connection it is important to expand the use of pathogenic agents and approaches that will improve both efficiency and safety profile of therapy, and reduce duration of reception of symptomatic medications with side effects.

#### What is Engystol?

One such approach, which allows us to solve the above problem, is bio-regulatory. It is carried out through the use

of complex bio-regulatory medications (CBM). Earlier in the literature was used the term “antihomotoxic medications” (AHTM). CBM include ultralow doses of active ingredients that activate drainage and detoxification processes in the body that help to restore self-regulation and self-healing. They also do not have pharmacokinetics and therefore are not metabolized in organism and do not require additional energy, that is, do not exert pharmacological stress [9-11].

Let us consider experience of successful long-term use of CBM Engystol by national and foreign doctors in case of many viral diseases.

Engystol for many decades demonstrates its high efficiency at various viral infections. It has immune-modulatory effect on the body – activates production of endogenous interferon, as well as other antiviral immune mechanisms. Vincetoxin and asclepias acid (components of Vincetoxicum) have impact on blood vessels and sympathetic nervous system.

Different dilutions of colloidal sulfur (Sulphur) allow to release (recover) disturbed enzymatic intracellular processes (-SH-group of enzymes), activate elimination of toxins from loose connective tissue of intercellular space (drainage and detoxification effect). Results of experiments and clinical studies have shown also direct antiviral effect of Engystol [12, 13].

#### Action mechanisms of Engystol

Studies in vitro showed that Engystol enhances phagocytic activity of granulocytes in the human body by 33.5% compared to control cultures. Another study in vitro showed that Engystol leads to an increase of phagocytic activity by 20-40% (depending on the degree of dilution – 1: 10 or 1: 100) in three

different immunoassays: granulocyte test, test for removing coal dust and granulocytes bioluminescence test [12].

Further studies *in vitro* have shown that Engystol considerably increases expression of T-lymphocytes which produce interferon- $\alpha$ . This effect was observed in all degrees of dissolution with no apparent dose-dependent manner. Other studies confirmed the effect of Engystol in the increased activity of granulocytes, phagocytes and neutrophils: destruction of virus-infected and tumor cells [12].

### Direct antiviral effect of Engystol

The study *in vitro* defined percentage of viral activity inhibition with various solutions of Engystol at testing of various DNA and RNA viruses [13]. Engystol demonstrated a dose-dependent antiviral activity against DNA viruses: inhibition of adenovirus type 5 by 73%, and herpes simplex virus type 1 (HSV-1) – by 80%, and in the case of RNA viruses: inhibition of respiratory-syncytial virus (RSV) – by 37% and of human rhinovirus (HRV) – by 20%. Thus, cytotoxic effects and other toxic effects of investigated doses of Engystol were not observed. The antiviral effect was independent of the activation of the cellular interferon system, which, according to the authors, indicates a direct antiviral effect of Engystol [12].

Engystol is produced in two medicinal forms – pills and injectable solution, which adds flexibility at prescription to various categories of patients [14].

Tolerability and efficacy of CBM Engystol had been studied for years by doctors of various specialties in many countries.

Thus, on the basis of Bogomolets National Medical University with the head of Department of childhood diseases in charge, major infectious diseases specialist of the Ministry of Health of Ukraine Professor S. A. Kramarev were developed methodical recommendations approved by the Ministry of Health of Ukraine “Alternative methods of treatment and prevention of influenza and ARVI in case of children”. They set out both traditional and alternative schemes of treatment and prevention of the most common ARVI in children (influenza, parainfluenza, adenoviral infection, and others). In detail authors analyze bio-regulation approach to the treatment of ARVI and influenza, as well as provide a detailed description of the used CBM. Engystol as the basic CBM is included in all schemes of ARVI, respiratory-syncytial virus infection treatment, is included in the scheme of treatment of acute viral conjunctivitis, keratitis, adenoviral tonsillitis, pharyngitis, bronchiolitis, and others. In schemes of treatment are included also other CBM: antiphlogistic – Traumeel S (3), lymphatic-drainage – Lymphomyosot (4), detoxification – Echinacea compositum S (5), mucolytic, etc. Detailed algorithm on use of Engystol for prophylaxis of viral diseases is described in methodological recommendations of the Ministry of Health of Ukraine [15].

German doctor Ulrich Vemmer, based on years of experience of CBM using describes in his work schemes of measles and varicella treatment, in which is widely used Engystol as basic antiviral medicine [4, 5]. He also suggests using Engystol

in complex treatment of infectious mononucleosis in order to improve overall immunity and as a non-specific antiviral agent [17].

Doctor of Medicine Anders Horst (Germany) describes patterns of CBM use in treatment of epidemic parotiditis, arguing that combination of medicines Engystol and Traumeel S reduces duration of illness by about half [6].

Within multicenter study conducted by German doctors Gabriella Gertsberger, Michael Weiser “Homeopathic treatment of infections of various origin”, were analyzed data on use, therapeutic efficacy and tolerability of the medicine Engystol [18]. Totally were analyzed 1479 case studies of the practice of 154 physicians in three European countries. The main indications for use of CBM Engystol were influenza, infection causing fever and prevention of infections by activation of immune system. Additional indications for use of medicine have included a variety of acute and chronic diseases of the upper respiratory tract, as well as other infectious diseases. Medicine Engystol has obvious therapeutic effect when used alone or in combination with any other form of therapy. There were no adverse effects even in cases where the medicine Engystol was used in combination with allopathic drugs [18].

In methodical recommendations “Methods of traditional medicine in preventive, rehabilitation and complex therapy of patients with influenza and ARVI” of the Ministry of Health of Ukraine are presented alternative methods and approaches to treatment and prevention of ARVI and influenza, including homeopathy, herbal medicine, Su-Jok therapy [16]. A separate section is devoted to use of CBM, anti-inflammatory, immune-modulatory and antiviral medicines, including Engystol.

It is concluded that main advantages of CBM are ease of use, appointment according to nosological principle, raw materials and finished products quality control. Efficacy, safety, no side effects, economic accessibility, possibility of combination with allopathic medicines make CBM indispensable for treatment and prevention of influenza in children, pregnant women, the elderly, patients with tendency to allergic reactions. Simultaneous use of CBM and allopathic medicines allows reduced dose of the latter taking by 50% [16].

Engystol usage experience convincingly demonstrated its efficiency both in the treatment of ARVI, other viral infections and in the cases when viral infection becomes a complication factor in injuries and degenerative-inflammatory processes of locomotor apparatus.

In our practice Engystol in combination with Traumeel S is efficiently used for pain treating in patients whose illness preceded, caused or associated viral infection.

### Conclusions

Based on the results of scientific and clinical studies, it can be concluded that Engystol is universal antiviral immune-modulator with proven efficacy in a wide range of viral diseases in children and adults. It has a high safety profile. It is used both independently and as part of complex treatment regimens. It goes well with any medicines, reducing their side effects on the body.

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