

News

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## **Medical case report on promising treatment with ColdZyme® of patients with primary immunodeficiency**

**Promising results after using ColdZyme in a patient with primary immunodeficiency has recently been published in the October issue of the Journal of Medical Case Reports. The publication describes Enzymaticas product ColdZyme Mouth spray that was used over a period of 15 months, reducing the incidence of upper respiratory tract infections with a twelve year old patient with primary immunodeficiency. During the treatment with ColdZyme, the patient and parents registered a reduction of cold symptoms and therefore an improved quality of life. Persistent infections of the oral cavity healed for the first time in several years, and the patient's schooling was almost normalized.**

A 12-year-old boy diagnosed with Variable Immunodeficiency (common variable immunodeficiency, CVID) began using ColdZyme three years ago, hoping to prevent contracting the common cold virus. The boy had since the age of two years treated with weekly infusions of adequate doses of IgG (Immunoglobulin G) at a dose of 100-150 mg/kg/week according to the international and national guidelines. Before treatment with ColdZyme, the patient had recurrent infections of the ears, sinuses, nose, bronchi and lungs - which led to frequent absences from school, hospital stays and reduced quality of life. The boy was in addition to the IgG treatment also treated with antibiotics for bacterial infections, and had on one occasion been on prophylactic antibiotic therapy for several months. In an attempt, hoping to reduce the number of cold episodes, the parents let the boy spray ColdZyme twice daily, morning and evening, while treatment with IgG and antibiotics, if necessary, proceeded as usual. The parents and the boy kept a detailed infection-diary both before and during treatment with ColdZyme.

The result of treatment with ColdZyme showed a substantial reduction both in the number of infections and the symptoms of infection, and reduced absenteeism in school, from 1.4 days per week to 0.3 days per week, during the 15-month treatment period, compared to a 21 months period before without treatment.

- Patients with primary immunodeficiency suffer from many infections before they get treatment with IgG. This treatment is to the vast majority of patients very effective, but there is a smaller group of patients, that despite adequate IgG treatment continues to have an increased frequency of infections in the respiratory tract. The effect of ColdZyme with this patient is very interesting and follow-up studies in a larger group of people with primary immunodeficiency will be very interesting to take part of, says Ann Gardulf, R.N., PhD, Associate Professor at Karolinska Institutet in Stockholm.
- When ColdZyme was used in order to reduce the number of common cold episodes, it seems that the spray also had effect on other secondary upper respiratory infections in the oral cavity and pharynx. We now proceed to evaluate the possibility of larger studies. The unexpectedly positive results have also prompted us to apply for a patent for the use of ColdZyme at immunodeficiency, says Mats Clarsund, Research Director at Enzymatica.

In Sweden, The National Board of Health and Welfare and the Healthcare anticipate that there are approximately 600 patients diagnosed with variable immunodeficiency. In total there are thousands of children and adults with some form of primary immunodeficiency. Children and adults with primary immune deficiency usually need life-long treatment with IgG. Preparations of concentrate of IgG are extracted from the plasma of healthy donors. Despite adequate IgG therapy, some patients continue to have upper respiratory infections, which make it interesting to find complementary treatments.

**For more information, contact:**

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Fredrik Lindberg, CEO Enzymatica AB

Tel: 0708-86 53 70 | E-mail: [fredrik.lindberg@enzymatica.com](mailto:fredrik.lindberg@enzymatica.com)

**About ColdZyme**

Colds are caused by viruses. ColdZyme is unique because it fights the cause of the cold, the cold virus, instead of treating the symptoms once the patient has already gotten sick like many other products. ColdZyme can thus both prevent and shorten colds.

**About Enzymatica AB**

Enzymatica AB is a life sciences company that develops and sells medical devices for fighting infectious diseases. In a short period of time, the company developed ColdZyme®, a unique mouth spray for fighting colds, launched the product in six markets and established it as one of the best-selling cold products in Swedish pharmacies measured in SEK. Our strategy is to continue growing by strengthening our position on existing markets and expanding to more geographic markets via established partners. The company's head office is in Lund and it is listed on the Nasdaq First North. For more information, please go to: [www.enzymatica.se](http://www.enzymatica.se).

Enzymaticas Certified Advisor is Erik Penser Bank.