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TREATMENT OF COUGH IN ACUTE RESPIRATORY INFECTIONS IN FREQUENTLY ILL CHILDREN

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ABSTRACT

The aim of the study: to evaluate the efficacy and tolerability of a herbal medicinal product of complex action for cough in acute respiratory infections in frequently ill children. Patients and methods: 54 children with the diagnosis of "Acute respiratory infection accompanied by dry cough" were examined, who were divided into 2 groups. Both groups received antipyretics, decongestants, and local antibiotics.

Keywords: herbal medicinal product with complex action, cough, acute respiratory infections, frequently ill children.

INTRODUCTION

Cough is one of the most common symptoms of respiratory infections in frequently ill children; in 30–40% of cases it is recurrent (lasts more than 3 weeks) [1], and in 15–20% of cases it lasts more than 8 weeks, i.e. it develops into a long-term (chronic) cough [2].

The aim of the study: to compare the efficacy and tolerability of a mucolytic herbal preparation with basic cough therapy in frequently ill children.

MATERIALS AND METHODS

An open, randomized, prospective clinical observation in parallel groups was conducted during 2022–2023. The study involved 54 frequently ill children aged 1 to 6 years, including 25 (46%) boys and 29 (54%) girls (Table 1), with a diagnosis of "Acute respiratory infection accompanied by dry cough".

Criteria for inclusion in the study:

- belonging to the "frequently ill child" dispensary observation group ("6 episodes of acute respiratory infections per year);
- 1–2 days from the onset of acute respiratory infection accompanied by dry unproductive cough;
- mild or moderate form of the disease.
- Patients of the 2nd group (comparison, n = 26) received only the main therapy for 7-10 days.

Both groups were formed homogeneously by age (the average age was 3.6 ± 1.2 and 3.7 ± 1.6 years in the 1st and 2nd groups, respectively), gender and initial clinical manifestations, which allows for a comparative assessment of the observation results and determination of the reliability of the results. The sample size was sufficient to draw conclusions.

An analysis of the patient's outpatient records was conducted to determine whether they belonged to the "frequently ill" group. The frequency of respiratory infection episodes over 1 year, the duration of each episode and the frequency of prescribing antibacterial drugs were assessed.

RESULTS AND DISCUSSION

Table 1. Distribution of frequently ill children by age

Patients	1–2 years	2–3 years	3–4 years	4–5 years	5–6 years
1st group (main)	2 (7%)	6 (22%)	9 (32%)	7 (25%)	4 (14%)
2nd group (comparison)	1 (4%)	5 (19%)	9 (34%)	8 (31%)	3 (12%)

Table 2. Frequency (%) and severity (points, M ± m) of initial clinical manifestations in the studied patient groups

Symptoms	1st group (main)	2nd group (comparisons)
Body temperature	100%	100%
	38,2 ± 0,38 points	38,4 ± 0,41 points
Symptoms of intoxication	93%	90%
	1,8 ± 0,43 points	1,9 ± 0,51 points
Hyperemia of the mucous membranes of the oropharynx	100%	100%
	1,6 ± 0,43 points	1,5 ± 0,54 points
Dry cough	100%	100%
	2,2 ± 0,42 points	2,1 ± 0,45 points
Dry wheezing	3%	4%
Erythrocyte sedimentation rate “ 15 mm/h	100%	100%
C-reactive protein “ 20 mg/l	25%	27%

Exclusion Criteria:

- need for systemic antibacterial therapy;
- bronchial obstruction;
- age under 1 year;
- individual intolerance to the components included in the study drug.

All patients were prescribed warm alkaline drinks, as indicated - antipyretic drugs (paracetamol), decongestants, local antibiotics.

The subjects were randomized into 2 groups.

• Patients of the 1st group (main, n = 28), in addition to the basic therapy, received orally 3 times a day for 7-10 days the mucolytic herbal preparation "Bronchipret syrup" in a dose of:

- at the age of 1-2 years - 2.2 ml per measuring cup;
- at the age of 2-3 years - 3.2 ml;
- at the age of 3-4 years - 3.2 ml;
- at the age of 4–5 years — 3.2 ml;
- at the age of 5–6 years — 3.2 ml.

The reason for visiting the clinic in all patients was an increase in body temperature to 37.5–39°C, the presence of intoxication symptoms (general malaise, headache, loss of appetite), catarrhal phenomena (hyperemia of the mucous membrane of the oropharynx, nasal congestion), dry cough (in all patients) (Table 2). Upon examination on the 3rd–4th day of treatment, patients in group 1 who received Bronchipret showed an improvement in sputum

discharge: the frequency of wet cough in group 1 patients by the 3rd–4th day of illness was 2 times higher than in group 2 (83 and 42%, respectively; $p < 0.05$). This difference persisted until days 14–17. 24% of patients in the 2nd group required expectorant medications on the 3rd–4th day of the disease due to unproductive cough and ineffectiveness of the therapy.

The elimination of attacks of various types of cough was significantly more often noted in the 1st group of patients by the 14th-17th day.

The effectiveness of cough treatment in patients of the 1st group was 98%, while in the 2nd - 61%.

In patients of the 1st group, a more rapid normalization of body temperature and a decrease in the severity of catarrhal phenomena was noted, starting from the 3rd-4th day from the onset of the disease.

By the 7th-10th day of observation, a more rapid normalization of the activity of the inflammatory process (erythrocyte sedimentation rate, C-reactive protein) was recorded in patients of the 1st group.

In the 2nd group of patients, by the 7th-10th day of the disease, 3 (12%) children required the prescription of antibacterial drugs. In the 1st group, antibacterial drugs were prescribed only to 1 (3%) child with acute otitis. While taking the study drug, no adverse events were registered in any patient [3, 4], and the drug was well tolerated [5]. When answering the phone on the 14th–17th day of observation, 96% of parents said that next time they would choose this drug to treat their child's cough.

CONCLUSION

Clinical observation has shown that Bronchipret has an antitussive, expectorant and anti-inflammatory effect in the treatment of acute respiratory infections in frequently ill children. It can be recommended for use in the treatment of this form of pathology from the first day of illness, lasting at least 10 days in an age-appropriate dosage. The practice of early administration of this drug to frequently ill children with chronic foci of infection and problems with mucociliary transport will reduce the frequency of recurrent/chronic cough and reduce the frequency of use of antibacterial drugs.

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