

PECULIARITIES OF CHILDREN WITH WHOOPING COUGH

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Introduction. Pertussis is a respiratory tract infection that can occur at any age but is most common and most likely to be fatal in young children, particularly infants at first 6 months. This infection is a vaccine-preventable childhood disease that is endemic throughout the world and has been increasing within recent years. Unvaccinated patients may become ill; furthermore, unvaccinated adolescents and adults are important *B. pertussis* carriers and thus are often the source of infection for unvaccinated infants during 1 year (who have had the highest increase in annual incidence and the highest case fatality rate). Virulence of outbreak strains may be increasing. One attack does not confer lifelong natural immunity, but secondary attacks and infections in previously vaccinated adolescents and adults whose immunity has waned are usually mild and often unrecognized.

Aim of the study. To determine the peculiarities of whooping cough among hospitalized patients treated at the Grodno State Clinical Hospital between 2023-2024.

Materials and methods. A review of 113 medical records of patients discharged from the Grodno Regional Infectious Diseases Clinical Hospital with a verified whooping cough for the period 2023-2024 was performed. Statistical analysis was carried out using Google Colaboratory I, the "Statistics" package, v.10, and the Excel program.

Results and discussion. Clinical evaluation of 113 children (0-18 years) was done, where there were females 54.9% (62 patients) and males 45.1% (51 patients). Majority of patients were kids less than 5 years old (total 62.8%, of these children 0-1 years – 30.1% (34 patients), 1-5 years – 32.7 % (37 patients). School-age children (6-10 years) numbered 23 (20.4%), adolescents (11-17 years) made 19 patients (16.8%).

In diagnosing whooping cough, PCR analysis confirmed *B. pertussis* and *B. parapertussis* DNA in 85.19% (1 case *B. parapertussis*, 7 cases without verification but diagnosis was confirmed epidemiologically by close contacts (siblings). Additionally, 51.85% cases required an enzyme-linked immunosorbent assay (ELISA) to confirm the diagnosis.

Clinical evaluation of 113 children revealed that 62.96% were appropriately vaccinated against Diphtheria, Tetanus & Pertussis (DTP), crucial for reducing morbidity and mortality.

White blood cell count indicated that 33.33% demonstrated a normal WBC count ($4-9 \times 10^9/L$). In contrast, 48.15% exhibited $10-19 \times 10^9/L$, 14.81% had levels ranging from $20-29 \times 10^9/L$ and in 3.70% had a markedly elevated count of $30 \times 10^9/L$. Additionally, in 29.63% cases erythrocyte sedimentation rate (11 mm/h) had elevated, warranting further investigation.

In terms of treatment, most children received appropriate antimicrobial therapy. 77.78% were given macrolide antibiotics, 18.52% kids did not receive antibiotics, raising concerns about their management.

Conclusion. More than 60 % of patients with whooping cough were kids of 0-5 years old (62.8%). Adolescents made only 16.8 %, but they could be an important carrier for *B. pertussis* and are thus often the source of infection for unprotected infants.

The findings indicate that while a majority of the children were vaccinated and diagnosed with pertussis. Continuous public health efforts must focus on confirming the importance of booster dose of DTP (or mono vaccine against whooping cough) around adolescent and pregnant women to prevent and protect the most sensitive to whooping cough groups (infants of first 6 months).

SUBCUTANEOUS DIROFILARIASIS IN A 60-YEAR OLD FEMALE IN GRODNO REGION, BELARUS

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Introduction. The vector-borne zoonotic helminth illness dirofilariasis, which is caused by *Dirofilaria immitis* and *Dirofilaria repens*, is a significant concern in the European Union, particularly in such countries as Belarus, Russia, and Ukraine. The symptoms appear due to the movement of immature helminths in human tissues or because the internal organs have a lengthy course and progressive maturation.

Aim of the study. This case study hopes to bring more awareness and understanding about human subcutaneous dirofilariasis. Also, it is important to suspect the presence of dirofilariasis even in non-endemic areas when the patient comes with a similar clinical presentation as we have discussed here.

Materials and methods. A 60-year-old woman was diagnosed with a spherical, elastic, smooth, and painless tumor-like formation in her scalp. The tumor was asymptomatic and spherical. The patient underwent surgical intervention, including excision of the tumor-like formation, under local anesthesia. The wound was treated with hemostasis, sutures, and a small amount of fluid was released.

Results and discussion. A patient in Belarus was diagnosed with dirofilariasis of the subcutaneous fat of the right temporal region after undergoing surgery. The condition is rare in Belarus, but there is a high probability of autochthonous transmission due to the discovery of an adult heartworm in a wild wolf and increasing human cases in mosquitoes. Diagnosis involves clinical indicators, parasitological, serological, histological,