

STRESZCZENIE W JĘZYKU ANGIELSKIM

Despite the availability of effective vaccination, varicella (chickenpox) remains one of the most common infectious diseases of childhood and a persistent concern in paediatric practice. In Poland, up to 200,000 cases of varicella are reported each year among both children and adults. Primary infection with the varicella-zoster virus (VZV) is usually mild and self-limiting, but it can sometimes lead to serious complications requiring hospitalisation.

The SARS-CoV-2 coronavirus pandemic reached Poland in March 2020, affecting the paediatric population as well. A noticeable increase in SARS-CoV-2 infections among children was observed during the fourth and fifth waves of the pandemic, caused by the Delta and Omicron variants. Due to the mild or asymptomatic course of infection in many cases, most parents were unaware that their children had contracted COVID-19.

The COVID-19 pandemic period had a significant impact on the epidemiology and course of infectious diseases in children, including varicella. An analysis of hospitalisation data for children due to varicella since 1999 indicates a clear increase in recent years. Until 2017, an average of around 40 patients were hospitalised annually due to varicella complications, while after 2018 this number rose to 58. In 2023, 98 children required hospital treatment for varicella — the highest number in the past 25 years. The median length of hospital stay remained unchanged at 5 days, both before 2017 and in the years 2018–2023. The age of hospitalised patients also did not change significantly, with a median of 4 years. In both analysed periods, the dominant group consisted of children under 5 years of age, although their percentage increased from 65% before 2017 to 71% in 2018–2023.

The profile of complications associated with varicella has also changed. Until 2017, respiratory tract infections were predominant (30.1%), with 12.1% being upper respiratory tract infections and 18% pneumonia and bronchitis. The second most common group of complications were bacterial skin infections (24.8%), and third were gastrointestinal symptoms (18.6%). Since 2018, bacterial skin infections have become the most frequently diagnosed complication, nearly doubling in frequency to 47.9% of cases. Respiratory tract infections occurred less often — upper respiratory tract infections accounted for 9.1%, while pneumonia and bronchitis made up 13.4% of all complications. Gastrointestinal symptoms

were observed in 14.6% of patients. The incidence of haematological complications remained at a similar level, at 9% before 2017 and 10.6% in 2018–2023.

In the post-pandemic period, an increase in hospitalisations due to varicella complicated by bacterial skin infections has been noted, often accompanied by a systemic inflammatory response. In 41.5% of children with bacterial infections, *Streptococcus pyogenes* was detected in swabs taken from skin lesions. This phenomenon correlates with the observed increase in invasive group A streptococcal infections across Europe. In 2023, patients with varicella were significantly more often diagnosed with bacterial skin infections accompanied by systemic inflammatory response, sepsis, toxic shock syndrome, and necrotising fasciitis, frequently requiring surgical intervention.

It seems that the widespread adoption of hand hygiene, surface disinfection, and limitation of direct contact during the COVID-19 pandemic contributed to a reduction in the number of patients with gastrointestinal complications.

Varicella complications most commonly affected the youngest group of children with properly functioning immune systems. Among hospitalised patients, no cases of prior varicella vaccination were recorded. Vaccination remains the most effective method of preventing both varicella itself and its related complications.