



A Prominent Group in The Burden of Childhood Chickenpox: Adolescents

Çocukluk Çağı Suçiçeği Hastalık Yükünde Dikkat Çeken Grup: Adölesanlar

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Dear Editor,

We read with interest the article titled “Immunity Status of Health Vocational High School Students Against Vaccine-Preventable Diseases” by Cura Yayla and colleagues. This study included a total of 946 nursing students born between 1998 and 2004, who were vaccinated according to the Turkish Ministry of Health’s vaccination schedule, with a median age of 17 years (range: 15-18 years). The seroprevalence status of the students against vaccine-preventable diseases was evaluated, and 91.7% of the students tested for varicella zoster virus IgG were found to be seropositive. Considering that the varicella vaccine was introduced into the Turkish Ministry of Health’s vaccination schedule in February 2013, this high seropositivity rate is thought to have developed through natural immunity (1). In this article, we wished to share our own observations in line with the study findings.

When patients, who were diagnosed with chickenpox and reported to İzmir Demokrasi University Buca Seyfi Demirsoy Training and Research Hospital between February 2024 and January 2025, were retrospectively reviewed, a total of 51 pa-

tients were identified. Fifty-two point eight percent (n= 28) of the patients were female. The median age was 168 months (range: 63-219 months). It was determined that 92% (n= 47) of all cases were adolescents aged 10 years and older, and 72.5% (n= 37) were cases born before the varicella vaccine was introduced into the vaccination schedule and had not received the varicella vaccine. Of all patients, 27.5% (n= 14) had received a single dose of the vaccine, with an average age of 116 ± 21.2 months. All five hospitalized cases were unvaccinated adolescents who were admitted to the hospital due to eye involvement and secondary skin infections, and one of the hospitalized cases developed renal toxicity associated with acyclovir treatment. Our findings highlight the disease burden in adolescents (Table 1).

Chickenpox is a vaccine-preventable disease that can cause serious complications such as pneumonia, secondary bacterial skin infections, central nervous system involvement, thrombocytopenia, and hepatitis, especially in risk groups (2). Infants, adolescents, adults, pregnant women, and immunocompromised individuals are considered to be at risk (2,3). In our country, the chickenpox vaccine has been administered

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Table 1. Evaluation of patients being monitored due to chickenpox

General Characteristics				
Number of patients			51	
Sex			Female: 52.8% (n= 28) Male: 47.2% (n= 23)	
Median age (month)			168 months (range: 63-219)	
Vaccination status			72.5% (n= 37) unvaccinated 27.5% (n= 14) single dose vaccination	
Admission			5/51 (9.8%)	
Inpatients				
Patient no	Sex	Age (month)	Reason of admission	Length of hospital stay (day)
1	Male	179	Secondary skin infection	3
2	Male	161	Ocular involvement	4
3	Female	178	Ocular involvement	3
4	Male	205	Ocular involvement	4
5	Female	150	Sexondary skin infection	5

as a single dose at 12 months of age since February 2013, as part of the vaccination schedule of the Ministry of Health of the Republic of Türkiye. In the VARICOMP study conducted by Dinleyici and colleagues between 2008 and 2018, it was noted that the incidence of complications and hospitalizations decreased between the ages of 1 and 5 after vaccination, but the disease burden and hospitalizations shifted to ages 11 and older (4). The effectiveness of the single-dose chickenpox vaccine is 85%, in the United States, despite the single-dose vaccine, “breakthrough” infections, some of which were fatal, occurred in immunocompetent cases, leading the Centers for Disease Control and Prevention to recommend a second dose for children aged 4-6 years in 2006, after which a significant decrease in varicella incidence was demonstrated (2,3,5). Data from our country and the literature suggest that a catch-up vaccination program and a second dose of chickenpox vaccine for children aged 4-6 years who missed the opportunity for vaccination in our country should be considered. We believe that the reduction in viral circulation among adolescents could also protect populations that cannot be vaccinated due to immunodeficiency or pregnancy.

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