

Communication

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Communication

Ocular and Sleep-Related Presentations During Pediatric Seasonal Influenza: A Clinical Commentary Including Kelleni's Protocol

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Abstract

Pediatric seasonal influenza is often considered an acute febrile respiratory infection. However, as influenza viruses continue to evolve, new symptoms may appear and require careful evaluation, monitoring, and follow-up. This communication describes how, during the current winter season, increasing numbers of children had flu-like symptoms, as well as conjunctivitis and sleep-disordered breathing, such as new-onset snoring and short apnea-like episodes that were sometimes accompanied by hypoxemia. As conjunctivitis and sleep-disordered breathing are not typical signs of seasonal influenza, these characteristics should be regarded as related findings rather than defining traits. Possible contributory processes include upper-airway inflammation, post-nasal discharge, and simultaneous lower-respiratory involvement that may lead to hypoxemia. The updated Egyptian/African outpatient management using Kelleni's protocol is discussed, along with a call for continuous monitoring of the described associated symptoms by the pediatric and ENT/sleep clinicians to determine whether an evolving pattern is emerging across settings.

Keywords: seasonal influenza; H3N2; conjunctivitis; snoring; sleep-disordered breathing; Kelleni's protocol

A recent WHO Global Respiratory Virus Activity (GRVA) update for week 7 (ending 15 February 2026) showed that influenza, SARS-CoV-2, and RSV were co-circulating globally. Still, influenza remained the dominant virus overall (global positivity around 15%), while SARS-CoV-2 and RSV activity remained stable and low. However, influenza transmission showed substantial variability by country: some countries in Central America and the Caribbean, Tropical South America, Europe, and Eastern Asia reported very high influenza positivity (>30%), whereas other countries were closer to seasonal thresholds or reported only modest activity [1].

Interestingly, the GRVA updates indicated that influenza activity in Northern Africa, including Egypt, reached very high levels in week 6 (with >30% positivity reported in countries in the region) [2]. In contrast, by week 7, influenza positivity was reported as around 15% in northern-hemisphere temperate/subtropical areas.

Separately, according to a GISRS (WHO Global Influenza Surveillance and Response System) virological surveillance dashboard (Power BI), influenza A(H3) detections in Egypt have exceeded influenza A(H1N1)pdm09 detections from mid-December 2025 through the present, indicating a recent predominance of influenza A(H3N2) over A(H1N1)pdm09 among subtyped influenza A samples in that period similar to most of other zones globally [3]. Additionally, influenza A(H3N2) is undergoing a considerable round of antigenic drift driven by the rapid expansion of subclade K, which shows evidence of immune evasion, reflected by markedly reduced haemagglutination inhibition (HAI) reactivity to ferret antisera raised against the Northern Hemisphere 2025/26 vaccine strains [4].

I would like to report that since last December, I have repeatedly observed children with influenza-like illness manifested by rhinorrhea, high fever, and persistent cough who also developed conjunctivitis and new sleep-related breathing abnormalities. These abnormalities include new-onset snoring, brief witnessed apneas, and occasional nocturnal oxygen desaturation to about 88%, as measured by pulse oximeter, that persisted into the daytime, though within a higher range. Notably, though conjunctivitis and sleep-disordered breathing are not classic symptoms of seasonal influenza, upper-airway infections may contribute to the development of pediatric obstructive sleep apnea over time [5], and can temporarily induce or reveal snoring and apnea-like episodes [6]. Therefore, these findings should be presented as associated observations to be independently monitored by other clinicians, such as pediatricians and ENT/sleep specialists, both now and over the coming seasons, to determine whether a consistent pattern is emerging across settings. Importantly, the sleep-disordered breathing features, i.e., new snoring and brief witnessed apneas, were observed only during the acute infection and completely resolved after clinical recovery.

Importantly, Kelleni's home management antiviral protocol (nitazoxanide, ibuprofen, and azithromycin) was generally sufficient for outpatient care [7]. However, when high fever persisted beyond 36 hours, and defervescence could not be maintained without ibuprofen, amoxicillin/clavulanate was immediately added, suggesting a pneumonia-spectrum illness with azithromycin-resistant bacterial component or bacterial superinfection, which was the reason for sustained daytime hypoxemia, while upper-airway inflammation and secretions likely worsened snoring and transient obstruction during sleep.

Notably, the cough was often reported as troublesome, accompanied by prominent post-nasal drip and nocturnal coughing with vomiting on waking, in the absence of reflux symptoms. In some children, the cough persisted for 7–10 days after resolution of other manifestations, including normalization of oxygen saturation; this trajectory is compatible with a relatively short post-infectious cough driven by transient airway inflammation and increased cough reflex sensitivity, while ongoing upper airway subacute inflammation related to post-nasal drip may also have contributed to nocturnal symptoms. However, though I agree that bronchodilators and/or corticosteroids have mostly no benefit in the management of post-infectious cough [8], I suggest that symptom control and perceived recovery appeared to improve more often with a personalized supportive regimen focused on secretion management and nocturnal cough relief [9], most commonly; mucolytic/expectorant syrups (e.g., bromhexine-based preparations and/or enzyme-containing syrups such as alpha-amylase, where locally used), nighttime antitussives (including herbal remedies and cloperastine), and loratadine when an upper-airway allergic/post-nasal drip component was prominent; as well as in selected older children, a combination syrup containing ibuprofen with a decongestant was also used. The selection should always be individualized and conservative, with careful attention to age, dosing, comorbidities, and avoidance of overlapping products.

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Conflicts of Interest: None.

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