

A 5-year-old girl is brought to the physician with fever, nasal congestion, and rhinorrhea that began 10 days ago. She also has had a dry cough during the day that worsens at night. Her symptoms do not seem to be improving. On examination, the child has erythema and swelling of the nasal turbinates with purulent nasal drainage. Dripping is seen in the posterior pharynx. The left cheek has mild swelling. The remainder of the examination shows no abnormalities. Which of the following is the most common predisposing factor for this child's condition?

- ☐ A. Adenoidal hypertrophy
- ☐ B. Allergic rhinitis
- ☐ C. Environmental mucosal irritants
- ☐ D. Septal deformities
- ☐ E. Viral upper respiratory infection

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- ☐ A. Adenoidal hypertrophy [9%]
- ☐ B. Allergic rhinitis [18%]
- ☐ C. Environmental mucosal irritants [4%]
- ☐ D. Septal deformities [10%]
- ☒ E. Viral upper respiratory infection [59%]

[Proceed to Next Item](#)**Explanation:**User Id: 

Children with bacterial sinusitis present with persistent symptoms of nasal drainage, congestion, and cough. Symptoms last 10-30 days without improvement. Patients appear ill and have high fevers ($>39^{\circ}\text{C}$ [102.2°F]) and purulent nasal drainage for at least 3 days.

The most common predisposing factor for acute bacterial sinusitis is a viral upper respiratory infection. Contaminating bacteria cannot be cleared by mucociliary clearance due to mucosal inflammation from viral infection, leading to secondary bacterial infection.

Most cases of sinusitis can be diagnosed clinically. Computed tomography scan can be used to evaluate for complications such as orbital cellulitis or intracranial extension. Findings of sinusitis include sinus opacification, mucosal thickening, and/or air fluid levels. First-line treatment for acute bacterial sinusitis is amoxicillin plus clavulanic acid.

(Choices A, B, C, and D) Allergic rhinitis, anatomic obstructions (eg, septal deformities or adenoidal hypertrophy), and environmental mucosal irritants are less common predisposing factors for acute bacterial sinusitis.

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Educational objective:

The most common predisposing factor for acute bacterial sinusitis is a viral upper respiratory infection.

References:

1. [Upper respiratory tract infections in young children: duration of and frequency of complications.](#)