

A 5-year-old boy is brought to the physician due to 3 days of fever and sore throat. For the past 2 days, he has been complaining of throat pain and does not feel like eating. His father is worried because the boy is supposed to start school in 2 weeks. The child was previously healthy, takes no medications, and has up-to-date immunizations. He lives at home with his older brother, parents, and grandmother. His grandmother has a history of "cold sores." His temperature is 38.3 C (101 F), pulse is 108/min, blood pressure is 108/58 mm Hg, and respirations are 18/min. Oropharyngeal examination shows multiple 1-mm vesicles on the anterior tonsillar pillars. Several grayish ulcerated lesions are also seen in the posterior oropharynx. There are no lesions on the tongue, lips, or buccal mucosa. Nontender cervical lymph nodes are palpable bilaterally. The remainder of the physical examination is normal. Which of the following is the most likely cause of this child's condition?

- ☐ A. *Candida albicans*
- ☐ B. Coxsackie virus
- ☐ C. Epstein-Barr virus
- ☐ D. Herpes simplex virus
- ☐ E. *Streptococcus pyogenes*

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- ☐ A. *Candida albicans* [0%]
☒ B. **Coxsackie virus** [38%]
☐ C. Epstein-Barr virus [8%]
☐ D. Herpes simplex virus [35%]
☐ E. *Streptococcus pyogenes* [18%]

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Explanation:

User Id: [REDACTED]

Herpangina versus herpetic gingivostomatitis		
Diagnosis	Herpangina	Herpetic gingivostomatitis
Etiology	Coxsackie A virus	Herpes simplex virus type 1
Age	3-10 years	6 months-5 years
Seasonality	Summer/early fall	None
Clinical	<ul style="list-style-type: none">FeverPharyngitis	<ul style="list-style-type: none">FeverPharyngitis

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Etiology	Coxsackie A virus	Herpes simplex virus type 1
Age	3-10 years	6 months-5 years
Seasonality	Summer/early fall	None
Clinical features	<ul style="list-style-type: none">• Fever• Pharyngitis• Gray vesicles/ulcers on posterior oropharynx	<ul style="list-style-type: none">• Fever• Pharyngitis• Erythematous gingiva• Clusters of small vesicles on anterior oropharynx
Treatment	Supportive management	Oral acyclovir

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Differentiating between herpangina and herpetic gingivostomatitis can be challenging as both present with fever, pharyngitis, and oral lesions in young children. **Herpangina** is caused by the **coxsackie A virus** while herpetic gingivostomatitis is caused by primary infection with herpes simplex virus (HSV) type 1. Unlike HSV gingivostomatitis, herpangina has a seasonal pattern and infection most commonly occurs during **summer/early fall**.

The primary distinguishing feature between these illnesses is the location of the lesions. Herpangina typically presents with 1-mm **gray vesicles** on the **tonsillar pillars** and **posterior oropharynx** that progress to fibrin-coated ulcerations. It can be accompanied by lesions on the **hands** and **feet** (ie, hand-foot-mouth syndrome). In contrast, the vesicles in HSV gingivostomatitis (**Choice D**) generally localize to the anterior oropharynx and **lips**.

This patient's clinical presentation in the summer (prior to school entry) is consistent with herpangina. Treatment is supportive (eg, oral hydration and analgesia) as lesions self-resolve within 1 week.

(Choice A) *Candida albicans* causes **oral thrush** in infants and immunocompromised

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(Choice A) *Candida albicans* causes **oral thrush** in infants and immunocompromised children. Thrush appears as white plaques or pseudomembranes on the buccal mucosa and tongue; vesicles and ulcers are not seen.

(Choice C) Epstein-Barr virus (EBV) is the primary cause of infectious mononucleosis. It typically presents with fever, pharyngitis, posterior cervical lymphadenopathy, and tonsillar exudates. EBV does not cause oral vesicles or ulcerations.

(Choice E) *Streptococcus pyogenes* is the primary cause of streptococcal pharyngitis, which presents with fever, pharyngitis, tender anterior cervical lymphadenopathy, and tonsillar exudates. The absence of exudates and presence of vesicles in this patient makes the diagnosis less likely.

Educational objective:

Herpangina is caused by a **coxsackie viral** infection and presents with **posterior oropharyngeal vesicles/ulcerations**, fever, and pharyngitis. Treatment is supportive and consists of hydration and pain control.

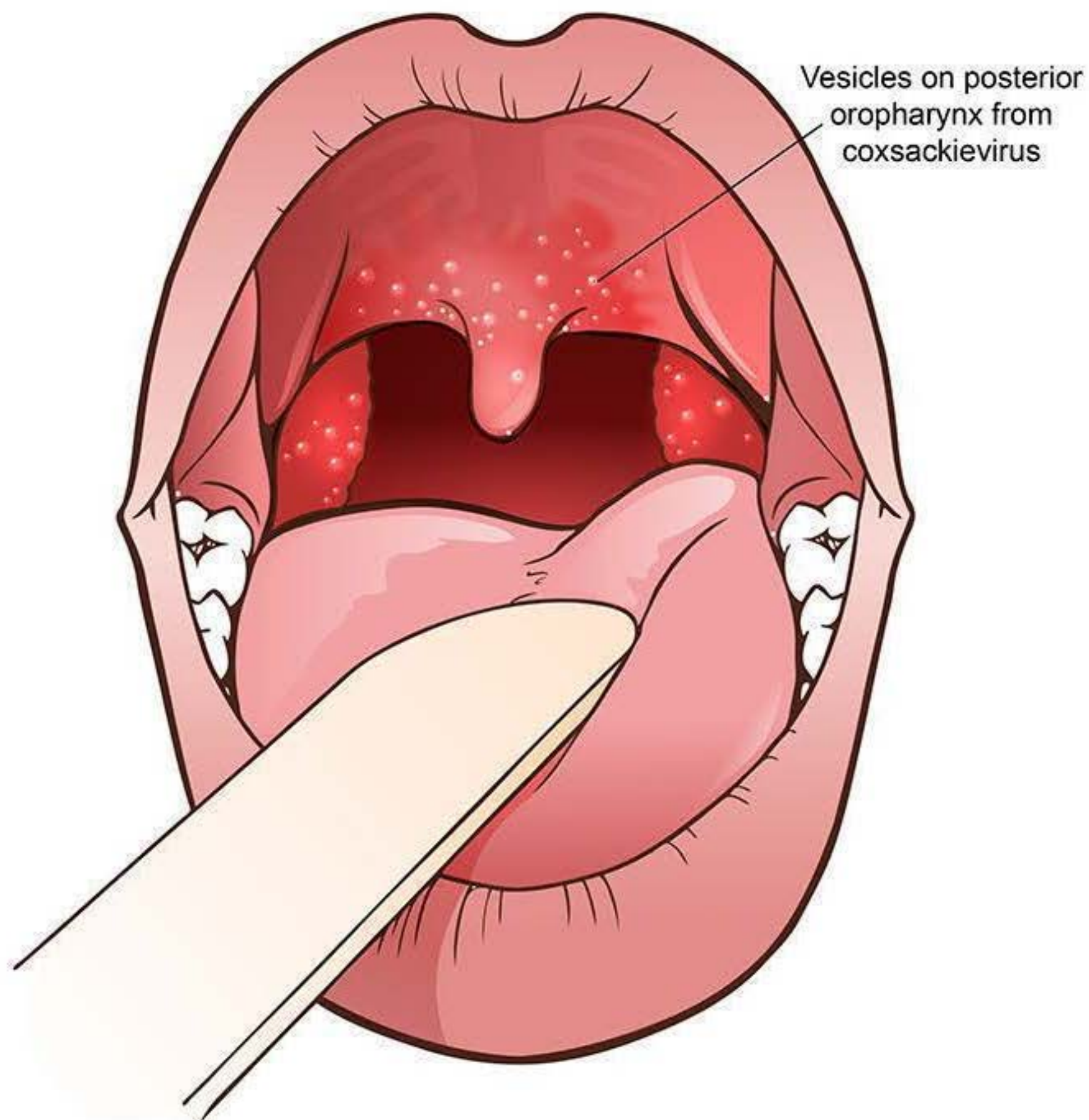
References:

1. **Clinical aspects and antiviral therapy in primary herpetic gingivostomatitis.**
2. **Acyclovir for treating primary herpetic gingivostomatitis.**

Media Exhibit

ntial diagnosis of oral lesions

Herpangina



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Media Exhibit

oot and mouth disease



Media Exhibit

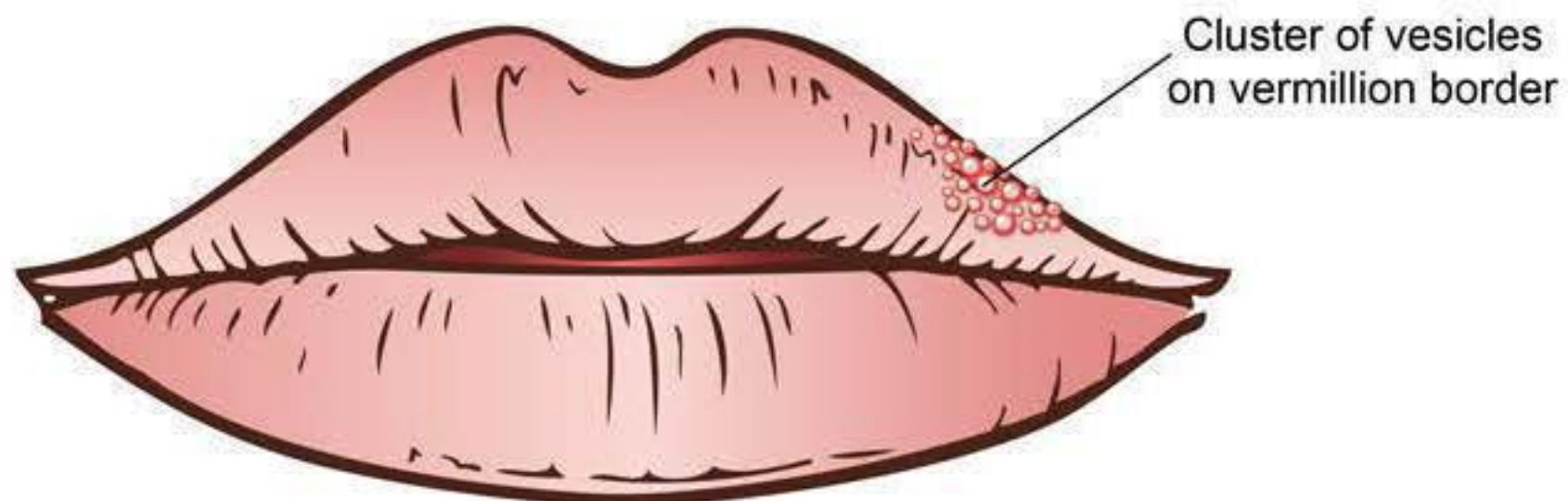
oot and mouth



Media Exhibit

ntial diagnosis of oral lesions

Herpes simplex virus ("cold sore")



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