

# Ludwig's angina in different age groups: Clinical variations and treatment approaches

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## Description

Ludwig's angina is a serious, potentially life-threatening condition characterized by bilateral submandibular and sublingual cellulitis. This rapidly progressing infection can lead to significant swelling and obstruction of the airway, posing a considerable risk to patients. The presentation and management of Ludwig's angina can vary significantly across different age groups, necessitating tailored approaches for effective treatment. In infants and young children, Ludwig's angina often presents with rapid onset of swelling and difficulty breathing. The condition in this age group is frequently associated with infections from dental issues or upper respiratory tract infections. Due to the small airway diameter in children, even moderate swelling can lead to severe respiratory distress. Early recognition and intervention are essential to prevent airway compromise. Treatment typically involves broad-spectrum antibiotics to address the underlying infection, along with surgical intervention if necessary to drain abscesses and relieve airway obstruction. Pediatric patients may also require supportive care, including oxygen therapy and intubation, depending on the severity of respiratory compromise.

In adolescents, Ludwig's angina may present similarly to adults but can sometimes be associated with different etiological factors. This age group might experience infections resulting from dental procedures or trauma. The clinical approach involves a thorough assessment to determine the source of infection and the extent of swelling. Antibiotic therapy remains the cornerstone of treatment, with the addition of surgical intervention if there is significant airway compromise or abscess formation. The management strategy may also include monitoring for systemic complications, such as sepsis, and providing supportive care as needed. Adults with Ludwig's angina often present with more pronounced symptoms due to the larger airway, which can accommodate more significant swelling before obstruction occurs. The condition in adults is frequently associated with dental infections, but other sources such as infections from the upper respiratory tract or post-surgical infections can also be implicated. Treatment for adults involves a combination of antibiotics to address the infection

and surgical drainage of any abscesses. In severe cases, airway management may be required, which could include intubation or tracheostomy if the airway becomes compromised. Managing underlying conditions, such as diabetes or immunosuppression, is also important to optimize outcomes and prevent recurrence.

In the elderly population, Ludwig's angina can be particularly challenging due to age-related physiological changes and comorbidities. Swelling may progress more rapidly, and the risk of airway obstruction is heightened. In older adults, the condition can be complicated by chronic health issues such as cardiovascular disease or diabetes, which can affect the overall management and recovery process. Treatment strategies include aggressive antibiotic therapy, careful monitoring of airway status, and surgical intervention when necessary. Additionally, managing underlying health conditions and providing supportive care are integral to the treatment plan. The use of advanced imaging techniques and close monitoring can help in assessing the progression of the condition and guiding treatment decisions. Across all age groups, Ludwig's angina requires a multidisciplinary approach for optimal management. In addition to antibiotic therapy and surgical intervention, supportive care is essential to address the airway management and prevent complications. Collaboration among specialists, including oral surgeons, otolaryngologists, and intensivists, ensures comprehensive care tailored to the needs of each patient.

## Conclusion

In conclusion, Ludwig's angina presents differently across various age groups, with variations in clinical presentation and management strategies. Infants and young children may require immediate airway management and supportive care, while adolescents and adults often face treatment challenges related to infection sources and airway compromise. Elderly patients, with their unique health considerations, necessitate a careful and integrated approach to management. Effective treatment of Ludwig's angina involves a combination of antibiotics, surgical intervention, and supportive care, tailored to the specific needs of each age group.

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