



## Pediatric Laryngeal Synovial Sarcoma: A Rare Case Report and Literature Review

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### Abstract

**Background:** Synovial sarcoma (SS) is a rare mesenchymal tumor that typically arises in the extremities; involvement of the larynx, particularly in children, is extremely uncommon and diagnostically challenging. **Case Presentation:** We report a 9-year-old boy with progressive hoarseness and sleep-disordered breathing, ultimately diagnosed with monophasic synovial sarcoma of the supraglottic larynx. Initial misdiagnosis as a primitive neuroectodermal tumor delayed treatment. Diagnosis was confirmed by histopathology, immunohistochemistry (TLE1, CD99, EMA, BCL-2), and SS18 gene rearrangement detection via FISH. Multimodal therapy—including limited surgery, chemotherapy, radiotherapy, and immunotherapy—resulted in complete metabolic remission, with a stable residual lesion on imaging. **Discussion:** This represents one of the youngest known cases of laryngeal SS. Its nonspecific presentation and rarity in children often delay diagnosis. Integration of histologic, immunophenotypic, and molecular data is essential. Organ-preserving multimodal therapy can yield favorable outcomes, though longterm monitoring remains critical due to recurrence risk. **Conclusion:** Pediatric laryngeal SS should be considered in persistent airway symptoms. Early multidisciplinary evaluation and molecular confirmation are key to diagnosis and treatment planning. Long-term surveillance is essential and continued reporting of such cases will help inform future clinical guidelines.

