

# Longitudinal Changes in Head and Neck Symptoms in Pediatric Systemic Lupus Erythematosus (SLE)

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## Background

- Systemic lupus erythematosus (SLE) is a rare, chronic autoimmune disease with diverse clinical manifestations. It affects 0.3 to 2.5 per 100,000 children.<sup>1</sup>
- Ear, nose, and throat (ENT) manifestations of SLE most commonly include oral and nasal mucosal ulcerations and facial rash, which are a recognized feature in classification criteria of childhood-onset SLE.<sup>1-4</sup>
- Pediatric SLE can manifest with diverse and subtle ENT findings, which can lead to diagnostic delays.<sup>5-6</sup>

## Purpose

- The goal of our study was to examine ENT symptom progression and biochemical trends in pediatric patients diagnosed with SLE.

## Methods

- We conducted a retrospective chart review of all pediatric patients diagnosed with SLE between 2018 and 2022 at a tertiary care children's hospital rheumatology clinic.
- ENT manifestations, systemic symptoms, and biochemical markers were assessed at baseline, with certain ENT manifestations assessed additionally at 6, 12, and 24 months.
- ANOVA analysis was used for continuous variables, and Cochran's Q test evaluated changes in discrete variables.

## Figures

### ENT Manifestations Decline over 24 Month Period

Time	Facial rash	Oral/nasopharyngeal ulcers	Epistaxis
Baseline	79 (44.9%)	49 (27.8%)	18 (10.2%)
6 months	0	3 (1.7%)	0
12 months	0	3 (1.7%)	0
24 months	0	3 (1.7%)	2 (1.1%)



Figure 1.  
The table summarizes the prevalence (%) of selected ENT manifestations in patients with SLE at baseline. Facial rash ( $P < 0.001$ ), oral/nasopharyngeal ulcers ( $P < 0.001$ ) and epistaxis ( $P = 0.004$ ) showed significant decline in prevalence following treatment. Below the table are clinical photographs illustrating facial rash and oral ulcers.

Symptom	Baseline Prevalence	Symptom	Baseline Prevalence
Allergic rhinitis	31 (17.6%)	Joint pain	97 (55.1%)
Prior tonsillectomy	18 (10.2%)	Fatigue	47 (26.7%)
Prior adenoidectomy	16 (9.1%)	Headache	38 (21.6%)
Cervical lymphadenopathy	13 (7.4%)	Abdominal pain	27 (15.3%)
		Weight loss	22 (12.5%)
		Eczema	18 (10.2%)

Figure 2.  
Baseline prevalence of head and neck symptoms and systemic systems in children with SLE and SLE-like symptoms. Values are presented as number of patients (percentage of total cohort, N = 176).

## Results

- The cohort consisted of 176 patients with an average age of 13.6 years. 85% were female, 50% were Hispanic/Latino, and 26% were African-American.
- 65% of patients exhibited ENT symptoms initially.
- ANA positivity was the most prevalent biochemical finding at onset, observed in 150 patients (85%), followed by 111 having anti-dsDNA (63.1%).
- Gender at birth and disease duration had no significant influence on the prevalence of head and neck symptoms ( $p > 0.05$ ).

## Conclusion

- ENT manifestations are common in pediatric SLE, with facial rashes being the most common.
- Constitutional symptoms such as joint pain and fatigue may alert clinicians of a potential autoimmune etiology, when these head and neck symptoms arise in children.
- Comprehensive clinical and laboratory evaluation is important in adolescents presenting with head and neck symptoms

## References

