

Uvular Injury: A Narrative Review

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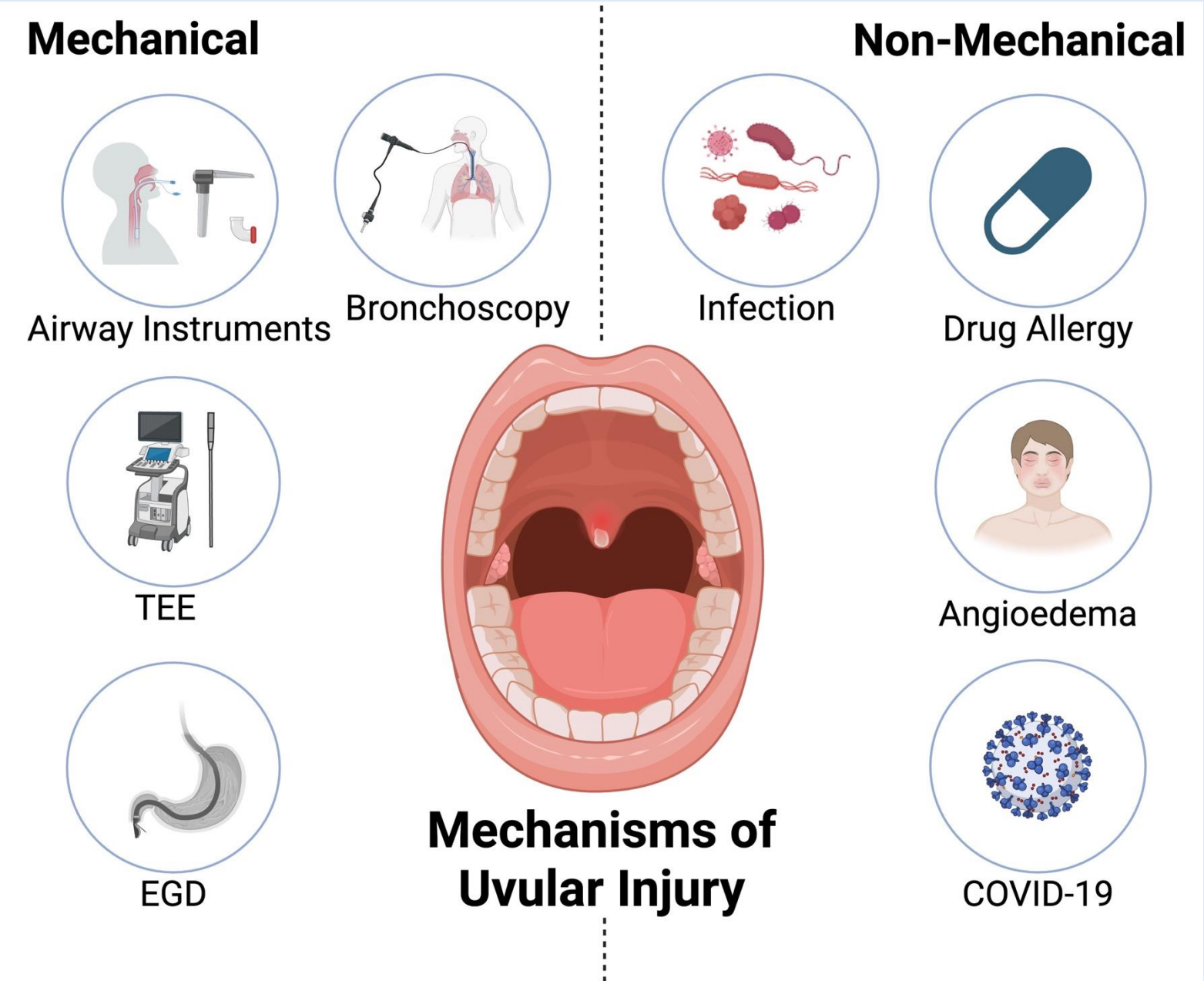


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Background

- The uvula plays essential roles in velopharyngeal closure, speech, mucosal lubrication, immune defense, and aspiration prevention.
- Uvular injury is uncommon but often under-recognized, presenting with **sore throat, dysphagia, odynophagia, foreign-body sensation, and rarely airway obstruction**.
- Etiologies span multiple specialties and include:



- No standardized diagnostic or management guidelines exist.

Methods

- Conducted a **narrative review** of MEDLINE, Embase, and Google Scholar (1978–2025).
- Search terms included **uvular injury, uvular necrosis, uvulitis, uvular edema**, and related terms.
- Included** case reports/series, retrospective studies, and reviews; **excluded** congenital palate conditions and unrelated studies.
- Two reviewers independently screened and extracted data on demographics, procedures, mechanisms, symptoms, treatments, and resolution timelines.
- Cases were categorized as **mechanical, non-mechanical, infectious, idiopathic, or pediatric**.

Results

Table 1: Summary Table of Uvular Injury				
Avg. Age	Male: Female Ratio	Most Common Instruments Used	Common Presentation	Management
Mechanical Causes of Uvular Injury				
38.7	2.9:1	ETT, Upper GI endoscope	Uvular edema and necrosis, sore throat, foreign body sensation, dysphagia, and odynophagia	Conservative with analgesics
Non-Mechanical Causes of Uvular Injury				
36.8	1:0	Cocaine Use	Uvular edema, sore throat, dysphagia, and foreign body sensation.	Corticosteroid
Infectious Causes of Uvular Injury				
43.7	1:0	COVID-19 Infection	Uvular edema, foreign body sensation and sore throat	Treat the underlying cause
Idiopathic causes of Uvular Injury				
24	1:1	N/A	Uvular edema, sore throat, foreign body sensation, and dysphagia	Corticosteroid
Pediatric Cases of Uvular Injury				
4.5	7:8	Mechanical injury and uvulitis	Fever, sore throat, lethargy, drooling, and irritability	Antibiotics, analgesic

Table 1: *Grading System of Uvular Injury Secondary to Endotracheal Intubation.* The proposed grading system classifies uvular injury from endotracheal intubation by Grade I to IV with management ranging from conservative to surgical excision if severe.

Table 2: Grading system of uvular injury secondary to endotracheal intubation				
Grade	Type of Injury	Clinical Presentation and Exam Findings	Management and Intervention	Notes
I	Uvular Edema	Distended, enlarged, translucent, shiny uvula with increased turgor and acute swelling	Conservative management (saline gargles, topical anesthetics, antihistamines, mouthwashes)	Typically self-resolving; no surgical intervention necessary
II	Uvulitis	Erythematous, inflamed uvula, possible minor hemorrhages or ecchymoses	Conservative management, may require steroids or antibiotics if persistent inflammation or secondary infection is suspected	Often responsive to initial conservative measures
III	Uvular Necrosis	Clearly demarcated necrotic areas (dark red or gray-white), significant swelling, necrosis of tip	Initial conservative management, surgical excision considered if conservative management fails or clear demarcation of devitalized tissue exists after two weeks	Surgical intervention considered based on clinical progression
IV	Uvular Auto-amputation	Shortened uvula, irregular borders following spontaneous amputation	Generally no intervention, microsurgical reconstruction may be considered if significant velopharyngeal insufficiency occurs	Rarely requires intervention, mostly self-resolving

Table 2: *Summary of Uvular Injury by Mechanism.* This table provides an overview of the clinical factors, presentation and general management of uvular injury classified by mechanism of injury.

Discussion

- Uvular injury is an uncommon but clinically significant complication, most frequently resulting from **mechanical airway or endoscopic trauma**.
- Non-mechanical, infectious, idiopathic, and pediatric cases highlight the **broad range of contributing mechanisms** across specialties.
- Most injuries resolve with conservative therapy**, though **early attention to airway status** is crucial, especially in pediatric and angioedema-related cases.
- Current evidence is limited by reliance on case reports and small series, resulting in **inconsistent management practices and frequent overuse of antibiotics**.
- A **structured, severity-based approach** improves clinical decision-making: conservative therapy for Grades I–II, selective surgical intervention for Grades III–IV, and targeted evaluation of non-mechanical etiologies.
- Future directions** include larger retrospective datasets, standardized documentation, refined risk-factor assessment, and development of **evidence-based diagnostic and management guidelines**.

Key Takeaways

- Uvular injury is uncommon but clinically important**, with presentations ranging from mild throat discomfort to airway obstruction.
- Mechanical trauma from airway or endoscopic devices is the leading cause**, and most cases are preventable with proper technique and device positioning.
- Most injuries resolve within 7–14 days with conservative management**, including analgesics, hydration, and anti-inflammatory therapy.
- Non-mechanical causes, particularly angioedema (ACE inhibitors, NSAIDs, cocaine) and infections, require rapid evaluation for airway risk** and targeted treatment.
- Pediatric cases demand heightened vigilance** due to faster progression to airway compromise.
- Antibiotics are frequently overused despite limited evidence** in non-infectious cases; management should be mechanism-specific.
- A **grading system (I–IV) helps guide treatment decisions**, reserving surgical intervention for persistent necrosis or auto-amputation.
- Future standardized guidelines and better reporting are needed** to improve prevention, diagnosis, and management across specialties.