

## **Amyloidosis in the Head and Neck: A Case Presentation and Literature Review**

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**Background:** As reported by the Cleveland Clinic, amyloidosis is a rare disease that affects 5 to 12 out of every 1 million people worldwide. Of those affected, 19% present with amyloidosis of the head and neck. Amyloidosis results from the accumulation of insoluble amyloid protein in tissue due to improper synthesis and processing of proteins. Amyloidosis of the head and neck region is rare and can be localized or systemic. Surgical intervention is often necessary to remove the amyloid tissue. Dr. Benjamin Anthony and Dr. Hector Mesa encountered a case of head and neck amyloidosis at an Indiana University hospital. An investigation of this case reveals the disease's presentation, diagnosis, and treatment.

**Project Methods:** The patient's data and surgical pathology reports were collected and formatted for analysis. Histological images of the pathology slides and laryngoscopy footage were obtained for examination. The case data was then compared to a literature review of other similar cases. After the comparison, the effectiveness of surgical treatments was analyzed and areas for future research were identified.

**Results:** After review of the literature and case, tissue biopsy followed by mass spectrometry was determined to be an effective diagnostic method. The literature and case differed in the clinical presentations they reported and the surgical intervention they concluded was most effective. Most literature reported the CO<sub>2</sub> laser to be the most effective at resecting the disease, while the case review indicated the laryngeal coblator.

**Conclusion and Potential Impact:** Despite the need for further research in diagnosing and treating amyloidosis, the literature and the case demonstrate effective methods exist. Research into treatment poses a greater need due to surgical limitations and potential morbidity. Ongoing research will analyze data from past Indiana University Health cases to evaluate diagnostic methods and treatment approaches. Thus, providing valuable insights for improving patient care.