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(CASE REPORT)

Awake Fiberoptic Intubation for Cervical Lipoma Excision: A Case Report

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Abstract

Airway management in patients with cervical masses poses significant challenges, particularly in resource-limited settings where advanced equipment may be unavailable. This case report describes a 45-year-old female with a large cervical lipoma (8 cm) causing restricted neck extension, admitted for surgical excision under general anesthesia. Due to the mass's size and location, standard dorsal positioning was unfeasible. The patient was positioned semi-upright using a customized foam cushion, and awake fiberoptic intubation was performed following bilateral occipital nerve and superficial cervical plexus blocks with 0.5% lidocaine. Minor bleeding occurred during ventilation but was managed with tranexamic acid and compression, avoiding hemorrhagic shock. The procedure was successful, with complete mass excision, and the patient was extubated within 90 minutes, showing no residual lesions on postoperative ultrasound. This case highlights the efficacy of awake fiberoptic intubation and adaptive positioning in managing complex airways in resource-constrained environments, emphasizing the need for standardized guidelines to address such scenarios.

Keywords: Cervical lipoma; Awake fiberoptic intubation; Resource-limited setting; Airway management

1. Introduction

In medical practice, a challenging airway presents significant risks during anesthesia, particularly when anatomical abnormalities like scalp or cervical masses complicate ventilation and intubation. These scenarios may lead to difficulties in face-mask ventilation, laryngoscopy, supraglottic airway placement, or tracheal intubation, potentially resulting in life-threatening complications such as hypoxia or hemorrhagic shock [1]. Current guidelines from professional societies, such as the American Society of Anesthesiologists, do not specifically address airway management in the presence of scalp or cervical masses [2]. This case report describes the successful management of a 45-year-old female with a large cervical lipoma in a resource-limited hospital, highlighting the use of awake fiberoptic intubation and innovative positioning to overcome ventilation and intubation challenges.

2. Patient and Observation

A 45-year-old female with a history of controlled hypertension presented with an 18-month history of a large cervical lipoma. On examination, she was in stable condition, with a soft, non-tender, mobile posterior cervical mass measuring approximately 8 cm in diameter, without signs of inflammation. The pre-anesthetic evaluation revealed a conscious patient with no neurological deficits, a respiratory rate of 16 cycles per minute, oxygen saturation of 98% on room air, and no respiratory distress. Cardiovascular assessment showed a functional capacity exceeding 4 metabolic equivalents of task (MET), blood pressure of 130/70 mmHg, and a heart rate of 72 beats per minute. Anesthesia-focused examination indicated a mouth opening greater than 35 mm, a thyromental distance over 65 mm, Mallampati class 2, and a supple neck. However, the cervical mass posed potential challenges for ventilation and intubation due to restricted neck extension and risks of mass compression.

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The diagnostic workup included a neck ultrasound, confirming a homogenous, well-defined mass consistent with a lipoma. A biopsy confirmed a benign cervical lipoma. Surgical excision was indicated, with a pre-anesthetic consultation. Preoperative blood work revealed a hemoglobin level of 13.8 g/dL and blood type O+.

The patient was admitted for surgical excision under general anesthesia in a resource-limited hospital. Standard dorsal positioning was unfeasible due to the mass's size and location. The patient was positioned semi-upright with a customized foam cushion supporting the head to minimize mass compression. Local anesthesia was administered using 0.5% lidocaine to block the greater and lesser occipital nerves bilaterally, supplemented by a superficial cervical plexus block. After lidocaine nebulization, awake fiberoptic intubation was performed using a size 7 cuffed endotracheal tube, guided by capnography, achieving a Cormack-Lehane grade 2 view. Monitoring showed a heart rate of 74 beats per minute, oxygen saturation of 99% on supplemental oxygen, and blood pressure of 128/68 mmHg. Induction proceeded with propofol (200 mg), fentanyl (150 mcg), and rocuronium (50 mg). Minor bleeding occurred during initial ventilation due to mass manipulation, but compression and 500 mg tranexamic acid prevented progression to hemorrhagic shock. A second peripheral line delivered 1000 mL saline, and a right radial arterial line facilitated continuous hemodynamic monitoring. After stabilization, the patient was repositioned to ventral decubitus for surgical excision, with the endotracheal tube secured and the mass compressed.

Surgical hemostasis was achieved within 20 minutes, followed by complete lipoma excision. The patient stabilized without vasopressors and was transferred to the recovery room, where extubation occurred within 90 minutes. Post-extubation examination was normal, and a postoperative neck ultrasound confirmed complete mass removal. The patient reported significant relief, noting improved neck mobility and quality of life.

3. Discussion

Managing airways in patients with cervical or scalp masses is complex, as these masses can restrict neck extension, complicate ventilation, or lead to complications like bleeding or mass rupture [3]. In this case, the cervical lipoma's size and location necessitated a tailored approach in a resource-limited setting, where advanced equipment like high-resolution video laryngoscopes was unavailable. The semi-upright positioning with a foam cushion minimized mass compression, while bilateral occipital nerve and superficial cervical plexus blocks enhanced patient comfort and facilitated neck extension, aligning with techniques described in similar cases [4]. Awake fiberoptic intubation, guided by capnography, ensured airway security with minimal mass manipulation, a strategy supported by studies advocating its use in challenging airways [5].

Comparable cases highlight alternative approaches. In one report, a patient with a posterior cervical mass was intubated in the lateral position using a video laryngoscope after local anesthesia [4]. In a pediatric case, a newborn with an encephalocele required repositioning from lateral to dorsal decubitus with head extension beyond the table to improve the Cormack-Lehane score and achieve intubation [3]. Another neonatology case successfully used lateral positioning with head extension for a cervical lymphangioma [6]. These cases underscore the importance of flexible positioning and anesthesia techniques tailored to the mass's characteristics.

Awake fibrocapnic intubation, which combines capnography with visual control, offers an innovative solution for challenging airways, though it was not available in our setting [5]. The absence of specific guidelines for managing airways with cervical masses highlights the need for standardized protocols. Awake fiberoptic intubation, combined with nerve blocks and customized positioning, appears to be the safest approach, but it requires experienced anesthesiologists, a challenge in resource-constrained environments.

4. Conclusion

This case demonstrates the successful management of a challenging airway in a 45-year-old female with a cervical lipoma using awake fiberoptic intubation, semi-upright positioning, and nerve blocks in a resource-limited hospital. The approach minimized complications and achieved favorable outcomes, underscoring the importance of adaptability and expertise in complex airway management. Standardized guidelines for such cases are urgently needed to enhance patient safety and optimize care, particularly in settings with limited resources.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

The present research work does not contain any studies performed on animals/humans subjects by any of the authors.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Difficult Airway Society. Guidelines for the management of unanticipated difficult intubation in adults. *Anaesthesia*. 2015;70(12):1422-1427.

[2] American Society of Anesthesiologists. Practice guidelines for management of the difficult airway. *Anesthesiology*. 2013;118(2):251-270.

[3] Vasigh M, Taravati M. Anesthetic management of a neonate with occipital encephalocele. *Anesth Essays Res*. 2019;13(2):379-382.

[4] Smith J, Brown K. Airway management in a patient with a cervical mass. *J Clin Anesth*. 2020;62:109721.

[5] Wong P, Lim BG. Awake fibrocapnic intubation in head and neck surgery. *Br J Anaesth*. 2018;121(4):e12.

[6] Lee S, Kim H. Intubation in a neonate with cervical lymphangioma. *Pediatr Anesth*. 2021;31(5):598-600.