



# Lateral Intubation, a Forgotten Art??: A Case Report

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## Abstract

Airway management and intubation form the basis of anesthesiologists and paramedical staff training and working as this skill is undoubtedly a life-saving virtue. Patients with multiple comorbidities problems are encountered in emergency and elective operation theatre areas; many eventually require tracheal intubation. Supine position is usually followed, but many times, it may not be possible to secure the airway in this most favored position. We would like to reemphasize the importance of the lateral intubation technique, which can be used as an alternative method of intubation and should become an essential tool in the armory of anesthesiologists and paramedical staff.

## Introduction

Airway management is a fundamental skill required for anesthesiologists [1]. New technologies and equipment have made the learning curve less steep for trainees and fascinating at the same time[2]. Nonetheless, the basic skills of airway management like mask ventilation and direct laryngoscopy are the foundation of airway training and practice. For apparent reasons, a supine position is favored for intubation in both elective and emergencies. Tracheal intubation in the lateral position is often fraught and not routinely practiced because the anesthesiologists are unfamiliar and lack confidence in this technique.[3] We would like to highlight the importance of this invaluable alternative method and tips and tricks to learn this skill. It should be part of the armory of anesthesiologists, regular training of residents, emergency physicians, and paramedical staff. Routine training in tracheal intubation in a lateral position can help anesthesiologists accomplish more during emergency and routine airway management. Written informed consent was taken from the patient for publication of this case report.

## Case Report

A 28-year-old male with a high voltage electric burn history with Extradural hematoma (EDH) was admitted. His EDH was managed conservatively, and he underwent debridement and split skin grafting on the right forearm, hand, thigh, and shoulder two times under general anesthesia. Due to prolonged immobilization, the patient had developed a pressure sore on the sacral region, for which the surgical team advised him to lie down in prone and lateral position. He was posted for debridement and primary closure of

the bedsore ulcer in the prone position. Considering the positioning concerns of his condition, it was decided to intubate the patient in a lateral position. ASA standard monitors were attached, and the patient was asked to obtain a comfortable lateral position with a pillow underneath the neck and head to obtain a neutral position. The patient was induced with propofol; an intubating dose of atracurium was given after confirming bag and mask ventilation (Figure 1). After adequate flexion of the neck and head extension, laryngoscopy (Figure 2) and endotracheal intubation was done in the right lateral position (Figure 3). The surgery was uneventful, and the trachea was extubated in the prone position [4].



**Figure 1:** The patient was induced with propofol; an intubating dose of atracurium was given after confirming bag and mask ventilation.



**Figure 2:** After adequate flexion of the neck and head extension, laryngoscopy.



**Figure 3:** Endotracheal intubation was done in the right lateral position.

## Discussion

Endotracheal intubation is routinely performed by anesthesiologists, paramedical staff, and emergency physicians. Although simple, it requires a reasonable skill as failure to establish an airway could lead to irreversible brain damage and even death [5-7]. The operating room provides optimal conditions and a controlled environment for intubation. Sniffing is supposedly ideal for endotracheal intubation, which involves flexion at the neck and extension at the head. It is uncommon even for a trained anesthesiologist to routinely perform intubation in a lateral position. Some studies have demonstrated the use of intubating laryngeal mask airway and light wands while electively intubating patients in the lateral position [8,9]. Also, laryngeal mask airways have been successfully used as a rescue airway device to deal with unexpected airway loss in operation theaters [10]. Sudden loss of airway can cause a lot of undue anxiety and apprehension for the treating physicians. However, we would like to reemphasize that lateral position is not as disadvantageous as it is thought to be [11]. This position has its unique advantages; the foremost is that it prevents the collapse of laryngeal structures, keeps airway patent, and thus facilitates mask ventilation and tracheal intubation. Studies have suggested that lateral position increases

functional residual capacity in pediatric patients [12]. Since there is no limitation in neck extension and flexion in this position, the ideal sniffing position can also be obtained easily by placing a towel under the cheek and head. There are many situations in which intubation in lateral position becomes necessary, like accidental loss of airway in lateral position during surgery, a child with meningomyelocele, securing airway in an active oral bleed (facial trauma, post-tonsillectomy [13] post cleft lip, and palate surgical complications) and any painful or vascular wound at the back of the patient. Airway manipulation in lateral position also reduces the risk of aspiration. Prepositioning by the awake patient before induction in surgeries also reduces the positioning-related injuries. Ours was a moderately built patient, and no difficulty in the airway was anticipated. He had pressure sores on his sacral area, making lying in a supine position painful. These two reasons made our team secure the airway in the right lateral position.

## Conclusion

Finally, we would like to reiterate the importance of intubating in a lateral position which could be conducive and advantageous. The art of intubation in a sideways position should be an essential part of anesthesiologist training to make them familiar with the ergonomically challenging position. However, patient-specific criteria like obesity, cervical spine instability, and difficult airway should always be considered before treading the path. Well-controlled randomized control trials would help to give more insight and clear the picture.

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**Conflict of Interest:** None.

**Consent to publication:** Taken.

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