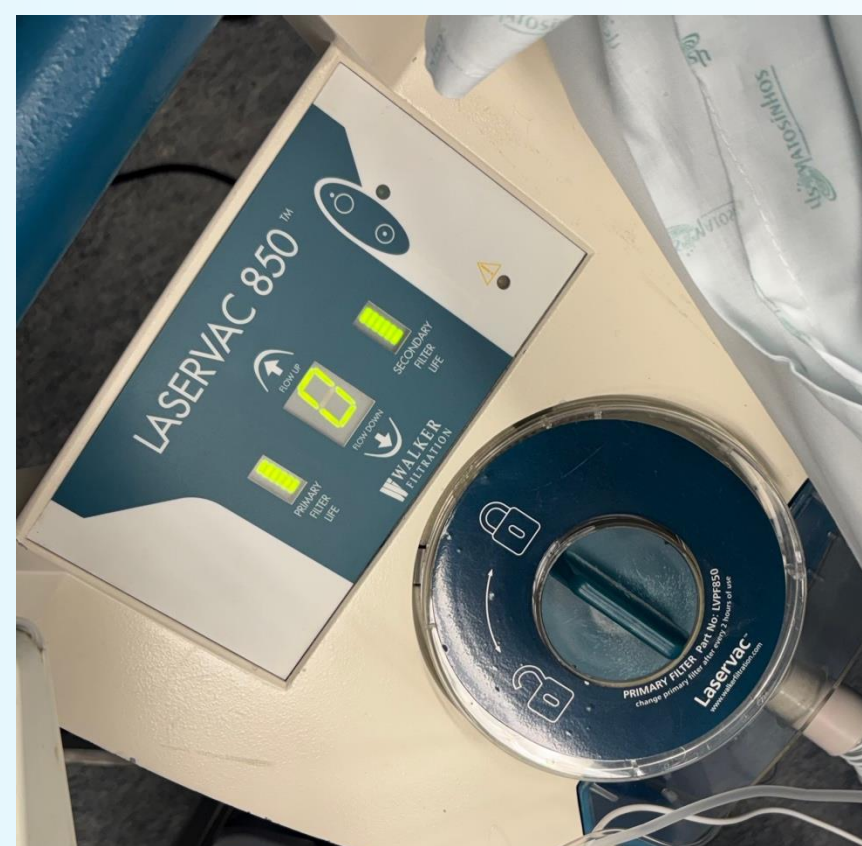


Surgical and Anesthetic Safety for Patients and Staff during Laser Laryngeal Surgery

Mariana Borges Mesquita, João Manuel Vilaça Guimarães (1)
(1) – Operation room nurses at ULSM Matosinhos - Portugal

Introduction

CO₂ laser laryngeal surgery represents a **significant technological advance**, allowing greater precision and reduced tissue trauma. However, this procedure carries **increased risks** for both the patient and healthcare professionals due to the specific characteristics of the laser. **Surgical and anesthetic safety** are therefore **essential** to ensure efficacy and prevent complications during the operative procedure.



Objectives

- Emphasize the **importance of patient and team safety** in the operating room during CO₂ laser laryngeal surgery.
- Adhere to a specific checklist for **verifying surgical and anesthetic safety procedures**.
- Ensure the **correct and timely use of materials and equipment** appropriate for laser use.

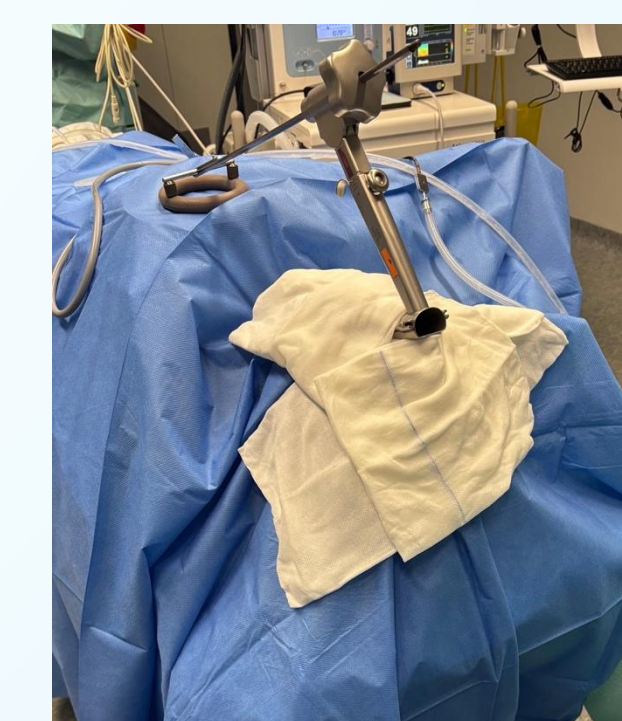


Methodology

Our safety behaviors in preparing operation room and patients for laser surgeries, contain **essential items** such as:

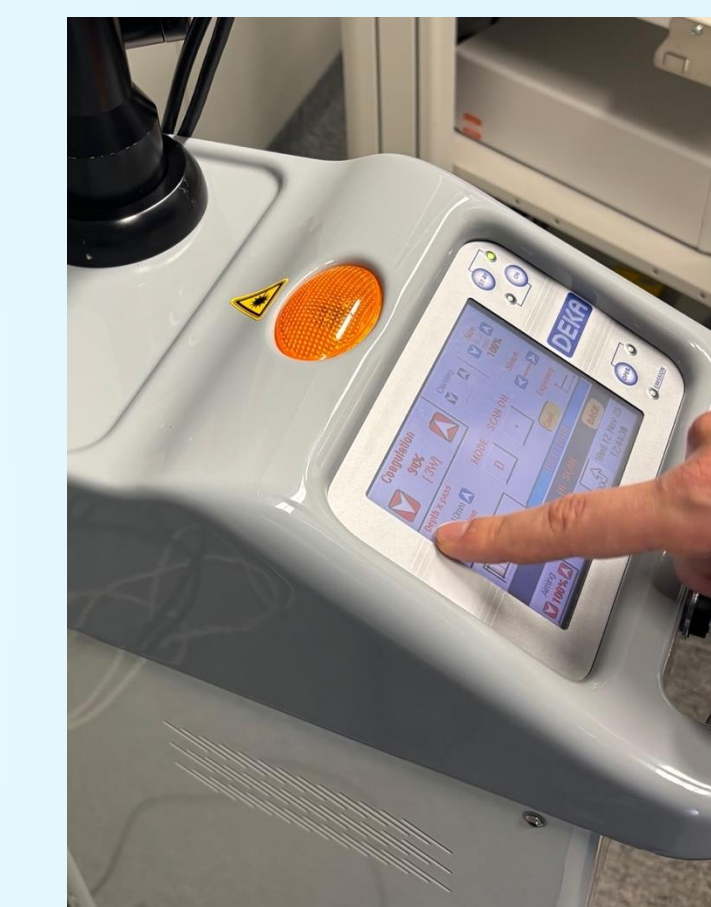
- Installation of **external signage** and **personal protective equipment** for professionals (mask, laser safety goggles, gloves and gown);
- **Verification of the laser-compatible endotracheal tube** with the double cuffs filled with saline solution;
- **Inspection and testing of the entire laser system** before surgery begins;
- **Protect the patient's eyes and face** with compresses moistened with saline solution to reduce the risk of burns, if it happens.

Additionally, **individual protective measures** were applied to the staff, including laser-specific eyewear and facial masks capable of filtering fine particles. External warning signage was placed on all doors to prevent entry by unprotected individuals.



Results

The implementation of this type of prevention care, **reduced the risk of accidents**, including airway and facial burns in patients as well as ocular and respiratory injuries among professionals. **Team adherence to safety practices was high**, increasing confidence and workflow smoothness in the operating room.



Conclusion

The systematic application of specific safety measures and strict compliance with checklists enhance the safety of both patients and professionals during CO₂ laser laryngeal surgery. **Adopting these best practices helps minimize risks and optimize the quality of care delivered at Pedro Hispano Hospital – Matosinhos.**