

ANAESTHETIC MANAGEMENT OF HUGE THYROID SWELLING BY USING I - LMA

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PRESENTATION OF CASE

A 75-year-old female patient with huge thyroid swelling with Hyperthyroidism on tablet Carbimazole 5 mg BD, since 12 years was posted for total thyroidectomy. She was a known case of Diabetes on regular oral hypoglycaemic drugs. Presently she had complaints of difficulty in swallowing and change in voice. On examination she had right sided masses which were irregularly ovoid in shape, around 10*12cm in diameter, and circumvented whole right side of the neck. (fig1) Airway examination showed a three-finger breadth mouth opening, Mallampati Class 3 and restricted neck extension. IDL revealed gross shift of trachea to left with distortion of normal anatomy, vocal cord not visualized. Chest x- ray showed tracheal deviation to the left. (Fig 2). All other investigations were within normal limits. Awake fiberoptic technique for endotracheal intubation was planned.

Patient was shifted to insulin preoperatively. On the day of surgery insulin dose was skipped, tab Carbimazole was continued. Difficult airway gadgets were kept ready.

CLINICAL DIAGNOSIS

A huge thyroid swelling with Hyperthyroidism.

PATHOLOGICAL DISCUSSION

Clinical Interpretation- Large thyroid masses are a nightmare for the anaesthesiologist not only because of thyroid endocrinal abnormality but also because of difficult airway.¹ Anaesthesia for thyroid surgery has traditionally involved tracheal intubation.² Indeed, textbooks of anaesthesia suggest that in thyroid surgery endotracheal intubation is mandatory if there is tracheal deviation or stenosis, thyroid malignancy is suspected or the vocal cords are not functioning normally.³ Fiberoptic bronchoscope for tracheal intubation is considered the gold standard in such scenarios.¹ However, fiber-optic intubation may become extremely difficult in the situation of a distorted airway, or

when fiberoptic views are obscured, by e.g., massive hematemesis or plentiful sputum.⁴

We here present a case of huge thyroid in whom fiberoptic intubation failed and tracheal intubation was done using Intubating LMA.

MANAGEMENT- Patient was shifted to OT, I.V. line secured, and multi-parameter monitor attached to patient. Premedication with inj. glycopyrrolate, inj. midazolam 1 mg, inj. Rantac and inj. Emiset given. Oral mucosa anaesthetised using 10% lignocaine spray. 2% lignocaine injected (2ml) injected transtracheally. Fiberoptic bronchoscope was introduced through the oral cavity but the vocal cords visualization failed even after repeated attempts in expert hands. The procedure was abandoned, and direct laryngoscopy was tried for glottis visualization which also failed. Before opting for tracheostomy which also was predated to be difficult due to distortion of the anatomy, I-LMA was considered to secure the airway. Injection propofol 120 mg was given and I- LMA no 3 was inserted and cuff inflated with 20 ml of air. LMA was connected to Bains circuit and ventilated. Bilateral chest movements were adequate, ETCO₂ waveform assessed which was normal. Patient was paralyzed with inj. vecuronium 4 mg, Inj Fentanyl 100 ug was given and the surgeon was allowed to start the surgery. Anaesthesia was maintained with oxygen, nitrous and sevoflurane.

The surgeon separated the tumour from the trachea which made the trachea mobile. At this stage, endotracheal tube size 7 mm was passed through intubating LMA, external pressure was applied by the surgeon to push the trachea to the midline. The ETT tube was passed easily, cuff inflated, and endotracheal positioning confirmed. I-LMA cuff deflated and removed. The surgeon was asked to proceed with the surgery. The surgery was uneventful, and the patient was haemodynamically stable throughout the surgery. Postoperatively patient was ventilated electively and gradually weaned off the ventilator and extubated uneventfully.

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Figure 1. AP View of the Neck



Figure 2. Lateral View of the Neck



Figure 3. Cervical X-Ray Showing Tracheal Compression

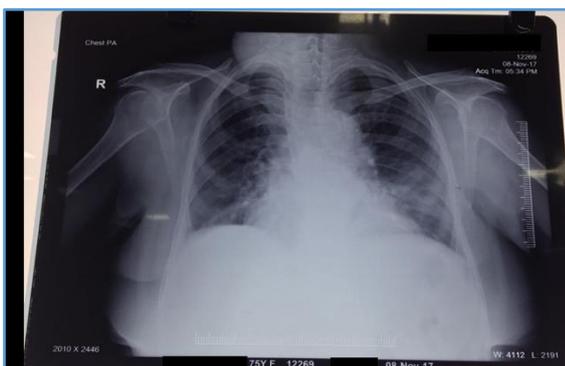


Figure 4. Chest X-Ray AP View

DISCUSSION OF MANAGEMENT

Thyroid surgery is commonly performed under endotracheal anaesthesia and an endotracheal tube is always the first choice to secure airway during this surgery. In our case also endotracheal intubation using fiberoptic bronchoscope was planned. As planned, we could not intubate this patient using fiberoptic technique due to nonvisualisation of the cords. Even with other techniques like direct laryngoscopy and video laryngoscopy we were not able to visualize the cords. But we could maintain the airway using ILMA and the surgery went on uneventfully. The successful use of the LMA in thyroid surgery requires co-operation between the surgeon and anaesthetist. Once the trachea was separated from the mass, endotracheal intubation was easy through the ILMA. Surgery and postoperative recovery was uneventful.

Even though fiberoptic bronchoscope is considered the gold standard in managing difficult airway, in case of failure with FOB, ILMA can be used as an alternative to maintain the airway. Invasive techniques like tracheostomy which is also very difficult in such cases due to distorted anatomy can be avoided.

FINAL DIAGNOSIS

Intubating LMA is a useful equipment which can be used in securing airway in difficult airway situations. The expertise required for its use is much easier compared to others like fiberoptic technique.

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