ANESTHETIC MANAGEMENT OF HUGE MULTINODULAR GOITER WITH COMPROMISED AIRWAY

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ABSTRACT

A 52 years old woman with MNG, came for thyroidectomy. Goiter was huge, causing tracheal compression, narrowing and deviation to the left. For induction of general anesthesia (GA), awake intubation with 6.5mm ID (Internal diameter), armoured endotracheal tube (ETT) was performed with the help of flexible fiber-optic bronchoscope (FOB).

INTRODUCTION

Globally, endemic goiter is prevalent in different regions of the world and is caused by iodine deficiency. For the effective release of airway compressive symptoms, thyroidectomy is usually indicated[3]. Airway and respiratory embarrassment can be avoided by proper airway management before surgery[4]. In suspected difficult airway circumstances, awake ETI should be done[5].

CASE REPORT

The patient was a 52 years old woman diagnosed as MNG, initially she had anterior neck swelling which increased in size progressively over the years and she developed dyspnea in supine position. She had been on tablets propranolol and carbimazole for hyperthyroidism.

Physical examination revealed a middle age woman averagely built. She could talk and breathe without difficulty in the standing and sitting positions but developed mild dyspnea in supine position. Her BP was 143/69mmHg, with a heart rate of 52 beats per minute. Systemic examination was unremarkable except prominent anterior neck swelling of 11cm x 9cm in size and multinodular in nature as shown in fig-1. Mouth opening was adequate, with Mallampati grade 4 but neck extension was very limited and thyromental distance couldn't be measured.

Routine laboratory investigations and thyroid function test were within normal limits except Chest x-ray and CT-scan showed severe tracheal narrowing and left-sided deviation of trachea, as shown in fig-2.

Figure-1: Patient before and after Thyroidectomy.

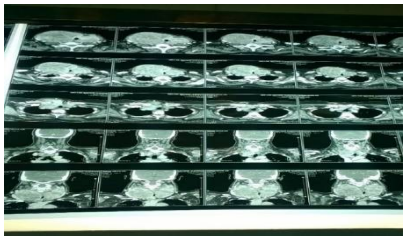

Figure-2: CT-Scan Neck showing tracheal narrowing

The diagnosis of MNG with compromised airway was made and total thyroidectomy was planned. To secure airway for ventilation, options were discussed with the patient and surgeon and consensus was made for awake fiberoptic ETI.

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ENT team was on board for an emergency tracheostomy. The patient was in sitting position, intravenous inj. Glycopyrolate 0.2mg, Xylocaine nasal spray, 4% lidocaine local spray used for gargles and 2% lidocaine 3ml injected intra-tracheal, using 25G spinal needle with ultrasound guidance as no tracheal ring was palpable. The ETT of 6.5mm ID was threaded over FOB and after successful intubation with the help of FOB, the ETT was connected to the anaesthesia machine via breathing circuit and was ventilated successfully throughout the procedure.

Thyroidectomy went uneventful and by the end of the procedure she was successfully extubated so transferred to the surgical ICU and was kept there for 24 hours, then shifted to ward and later on discharged to home on 3rd day of surgery.

DISCUSSION

Thyroidectomy for huge MNG with compromised airway is usually associated with difficult airway management at the time of induction of anesthesia, during and after surgery[6,7]. Management of difficult airway is of prime importance to the anesthetist as well as to the surgeon[8]. Failed endotracheal intubation incidence is high with Mallampati ¾ and neck mobility less than 90 degree[9]. Due to the extent of air way distortion in our patient, strategy was discussed with the patient and informed consent taken for awake ETI with the help of flexible FOB. Awake ETI using flexible FOB is the gold standard in difficult airway management[10]. In the mentioned case, neither intraoperative nor post-operative complications occur.

CONCLUSION

Airway management of large MNG with compromised airway should be considered for awake endotracheal intubation with the help of flexible FOB.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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