

Awake Blind Nasal Intubation in Difficult Intubation Scenario

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Abstract: Blind nasal intubation was introduced in 1928 by Stanley Rowbotham and popularized by both Stanley Rowbotham and Evan Magill. In a difficult airway scenario, when combined with topical anesthesia of nasal passages, superior laryngeal nerve block, transtracheal block and appropriate decongestion of airway it is probably the safest and the easiest technique in the opinion of the author. A Prospective study of 30 cases with anticipated difficult airway in a 5 month period from Jan 2015 to May 2015 in Siddhartha Medical college Govt General Hospital was done after approval by ethics committee of the institute as alternative technique of intubation where fibre optic equipment is unavailable. Combined with topical anesthesia of nasal passages superior laryngeal nerve block, transtracheal block and appropriate decongestion of airway awake nasal intubation was done. It is a very useful alternative technique in patients with anticipated difficult airway, when fiberoptic equipment is not available.

Key Words: Airway, awake, Blind, Difficult, Nasal

I. 1.Introduction

Blind nasal intubation was introduced in 1928 by Stanley Rowbotham and popularized by both Stanley Rowbotham and Evan Magill. Even to these days it is a relevant technique and if carried out properly, it can be quicker, safer and aesthetic when compared to other methods of intubation when Fiberoptic Bronchoscope is not available in the backdrop of a difficult airway.

In a difficult airway scenario, when combined with topical anesthesia of nasal passages superior laryngeal nerve block, transtracheal block and appropriate decongestion of airway it is probably the safest and the easiest technique.

II. Methods

A Prospective study of 30 cases with anticipated difficult airway in a 5 month period from Jan 2015 to May 2015 in Siddhartha Medical college Govt General Hospital was done after approval by ethics committee of the institute as alternative technique of intubation where fibre optic equipment is unavailable. Patient consent was taken prior to the procedure.

2.1 inclusion criteria: 1) bucked teeth 2) short neck 3) TMJ ankylosis 4) inadequate mouth opening 5) Mallampati class-3 and 4

2.2 exclusion criteria: History of bleeding diathesis, patient with basal skull fracture, patient refusal

2.3 technique:

2.3.1 premedication: inj. Glycopyrrolate 0.2mg iv., inj. ondansetron 4mg iv.

Nasal decongestion with 0.1% Xylometazoline nasal drops ½ an hour before intubation

2.3.2 Nerve blocks: Bilateral superior laryngeal nerve block- 3ml of 1% Lignocaine underneath greater cornu of hyoid bone, medially and cephalad piercing thyrohyoid membrane.

Transtracheal injection – 2ml of 4% Lignocaine topical in cricothyroid membrane in midline, aspiration of air and violent cough indicate proper injection.

After giving adequate airway blocks, appropriate sized ET tube impregnated with 2% Lignocaine jelly was introduced after keeping the patient in sniffing position with tube bevel facing nasal septum of most patent nostril. Pass the tube gently listening to breath sounds, encourage the patient to take deep breaths with mouth closed.

2.3.3 confirmation of successful intubation

Breath sounds through ET tube.

To and fro movements in the bag when connected to breathing system, with APL valve open.

Absence of phonation.

Capnogram.

III. Results

Study criteria included 30 cases of difficult airway intubated with above technique over a period of 5 months.

Sl no.	date	age	gender	indication	procedure
1	21/1/15	23yrs	female	Mallampati class-4	Diagnostic Laparoscopy
2	22/1/15	40yrs	male	Mallampati class-3	Common bile duct exploration
3	30/1/15	36yrs	male	Inadequate mouth opening	Drainage of sub phrenic abscess
4	7/2/15	42yrs	male	Inadequate mouth opening	Debridement of necrotic tissue on lt. side of cheek and maxilla
5	12/2/15	33yrs	male	head extension is contraindicated	C4,5,6 cord compression ,pedicle screw fixation
6	21/2/15	45yrs	female	Short neck	L4,5 disc prolapsed,discectomy
7	24/2/15	30yrs	male	Inadequate mouth opening	Radicular cyst of maxilla,excision
8	3/3/15	31yrs	male	Inadequate mouth opening	Rt.zygomaxillary complex fracture,plating
9	4/3/15	35yrs	male	Inadequate mouth opening	palatine fistula repair
10	5/3/15	36yrs	female	Short neck	L4,5 Prolapsed intervertebral disc,discectomy
11	9/3/15	38yrs	female	head extension is contraindicated	C4,5 laminectomy
12	12/3/15	60yrs	male	head extension is contraindicated	C4-7 compressive myelopathy,laminectomy
13	16/3/15	50yrs	female	Short neck	L4-5 Prolapsed intervertebral disc,laminectomy
14	27/3/15	20yrs	male	Inadequate mouth opening	Release of post burn contracture of elbow
15	2/4/15	50yrs	male	Bucked teeth	L4,5 laminectomy
16	9/4/15	40yrs	female	Bucked teeth	L5,S1 lamina fixation
17	14/4/15	24yrs	male	Inadequate mouth opening	Rt. Parasymphysis fracture mandible,plating
18	16/4/15	60yrs	male	Inadequate mouth opening	C5,6 fixation
19	18/4/15	40yrs	male	Inadequate mouth opening	Bilateral condylar fracture mandible,plating
20	23/4/15	34yrs	male	Mallampati class-4	Paraplegia cord compression,pedicle screw fixation
21	24/4/15	20yrs	male	Inadequate mouth opening	Rt.condyle fracture mandible,plating
22	29/4/15	35yrs	female	Limited neck extension	Post burn contracture neck release
23	30/4/15	34yrs	male	Bucked teeth	L5-S1 laminectomy
24	19/5/15	45yrs	male	Inadequate mouth opening	Oral submucous fibrosis,release
25	22/5/15	35yrs	male	head extension is contraindicated	C5,6 subluxation,pedicle screw fixation
26	25/5/15	53yrs	male	head extension is contraindicated	C4,5 subluxation,pedicle screw fixation
27	27/5/15	60yrs	male	Short neck	Mandibular symphysis fracture,plating
28	29/5/15	45yrs	male	Inadequate mouth opening	Tibia nailing
29	26/5/15	45yrs	female	Limited neck extension	Post burn contracture neck- release
30	31/5/15	30yrs	male	head extension is contraindicated	C2-3 spondylolisthesis,laminectomy

IV. Conclusion

It is a very useful alternative technique in patients with anticipated difficult airway, when fiberoptic equipment is not available.

References

- [1]. Miller's Anaesthesia, volume-1,8/edition
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