

RESULTS:-

The demographic datas of the patients were comparable in both groups

TABLE 2 : Demographic Data

	Group I	Group II
Age(in years)	41.15±7.2	39.45±9.2
Sex(M:F)	19:6	20:5
Weight(kg)	52.15 ± 6.7	51.27± 8.4

TABLE 3:INTUBATING CONDITIONS (COOPER'S SCORE),PARTIAL AND TOTAL SCORES OF PATIENTS

Group	Group I (Rocuronium Bromide)	Group II (Succinylcholine)
Dose (mg/kg)	0.6	1.5
Conditions	Score	
Jaw Relaxation	-	-
Poor	0	-
Normal	1	-
Moderate	2	-
Good	3	25
Vocal Cords		
Closed	0	-
Closing	1	-
Moving	2	-
Open	3	25
Response to intubation		
Severe coughing or bucking	0	-
Mild coughing	1	-
Slight diaphragmatic movement	2	8
None	3	17

Table 3 shows the intubating conditions and scoring in both Group I and Group II patients, using a system described by Cooper et al with respect to jaw relaxation, condition of vocal cord and response to intubation. Jaw relaxation was found to be good in all the cases in group I and group II. There was slight diaphragmatic movement in response to intubation in 8 cases in group I. There was no response to intubation in any case in group II. The conditions were found to be excellent in all case in group I and group II.

TABLE 4: INCIDENCE OF GRADES OF INTUBATING CONDITIONS

Grade	Score	Group I (Rocuronium Bromide)		Group II (Succinylcholine)	
		No. Of Patients	%	No. Of Patients	%
Excellent	8-9	25	100	25	100
Good	6-7	-	-	-	-
Fair	3-5	-	-	-	-
Poor	0-2	-	-	-	-

Table 4 shows the incidence of grades of intubating conditions in both Group I and Group II patients. The intubating conditions were found to be excellent in 100% patients in both the groups.

TABLE 5: Comparison of neuromuscular stimulation between the two groups

	Group I(Rocuronium)(n=25)	Group II(Sch)(n=25)
No response seen	2(8)	25(100)
1 response seen	1(4)	
2 response seen	2(8)	
3 response seen	4(16)	
All response seen	16(64)	

Table 5 shows that the Train of Four(TOF) was completely abolished in 8% of Group I patients compared to 100 % of Group II patients. About 64 % of patients in Group I showed all the four responses.Intubation was successfully done at 90 seconds even with partial or no suppression of train of four responses.

DISCUSSION

In the present study we found that the intubating conditions were found to be excellent in 100% patients in both the groups. Similar results were found in the studies conducted by Cooper et al¹³, Freiderick et al¹⁴, Zhou et al¹⁵ and Wierda et al¹⁶.

Some other workers⁷ have advocated the use of higher dose of rocuronium like 0.9mg/kg or 1.2mg/kg to reduce onset time but at the cost of unnecessarily prolonging the duration of action which is not clinically acceptable in many situations. It is better to use Rocuronium in doses of 0.6 mg/kg and wait for 90 sec rather than making futile attempts to intubating earlier.

In our study 8 patients of rocuronium group had diaphragmatic excursion during intubation, but using coopers score they were graded as excellent in intubating condition .This may be because good jaw relaxation and open vocal cords are the two attributes , which are required for intubation, outweighs diaphragmatic excursion.

Intubation was successfully done at 90 seconds even with partial or no suppression of train of four responses.This finding correlates well with the findings of Bartkowski et al¹⁷, who concluded that rocuronium provided good intubating conditions after 30 sec to 90 sec after injection of 0.6 mg/kg (2x ED 90) and was equal to that observed with succinylcholine. Although the onset time of rocuronium at the adductor pollicis muscle is slower than that of succinylcholine.

CONCLUSION

From our study it can be concluded that rocuronium can be a better and safer alternative to succinylcholine for endotracheal intubation. Rocuronium should definitely be given preference over succinylcholine in conditions where use of succinylcholine is contraindicated or hazardous.

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