

In this study we performed a randomized study to show the effect of different muscle relaxants (atracurium and rocuronium) on state, response and difference between them entropy during isoflurane anesthesia.

Groups were comparable in demographic data (in terms of age, height, weight. BMI, duration of surgery and ASA) and there was no statistically significant difference between groups (p-value > 0.05) (table 1).

Table (1): Comparison between groups as regard demographic data.

Demographic data	Atracurium group (n=20)	Rocuronium group (n=20)	T/Z/X2	p-value
Age (years)	36.1±10.3	38.8±8.12	0.9 ^T	0.37
BMI (kg/m ²)	25.38±4.1	25.14±2.2	0.24 ^T	0.81
Gender (male)	12 (60%)	10 (50%)	0.1 ^{X2}	0.75
ASA	1(1-2)	1(1-2)	0.31 ^z	0.76
SABP	127.85±19.2	135.7±16.4	1.39 ^T	0.17
DABP	68.6±14.02	72.95±10.88	1.1 ^T	0.28
MABP	88.35±14.65	93.87±12	1.3 ^T	0.2

Data expressed as mean ± SD, median(IQR),proportion, T = student t test , Z= Mann-Whitney test, X2= Chi-square

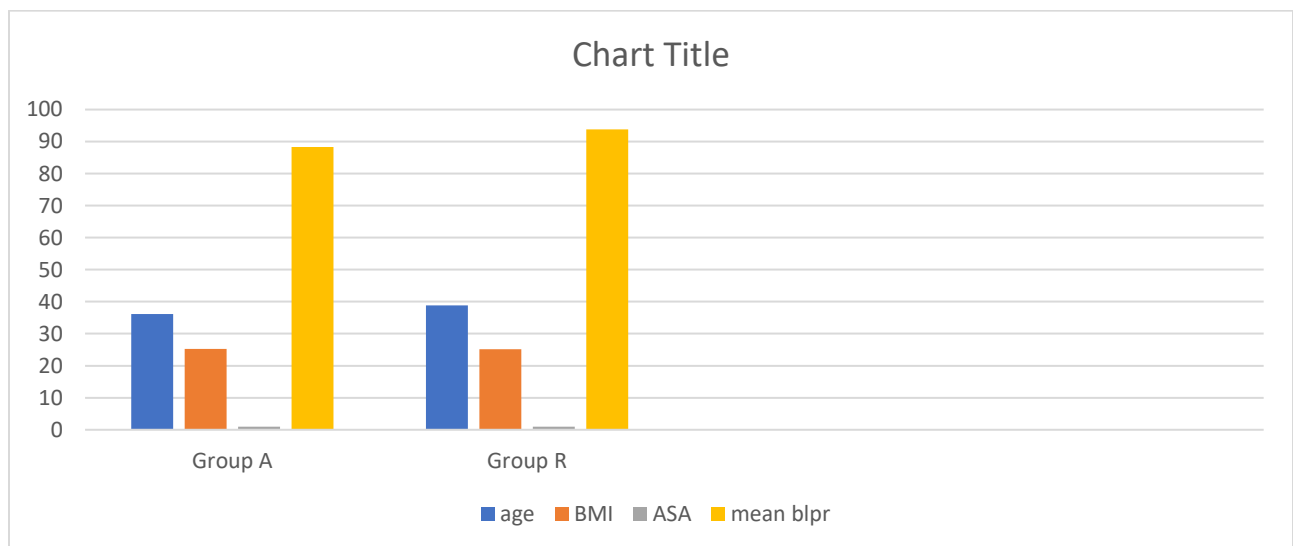


Fig. (1): Bar chart between two groups regarding demographic data.

There was no significant difference in RE, SE, or RE-SE among the groups in the awake state. Without noxious stimulation, we found a significant effect of isoflurane concentrations on RE, SE, and RE-SE, but without significant interactions between isoflurane concentrations and neuromuscular blockage.

Table (2): Group A who received atracurium

		RE_TOF_100%_mac_0.8%	RE_TOF_100%_mac_1%	RE_TOF_50%_mac_0.8%	RE_TOF_50%_mac_1%	SE_TOF_100%_mac_0.8%	SE_TOF_100%_mac_1%	SE_TOF_50%_mac_0.8%	SE_TOF_50%_mac_1%
RE_TOF_100%_mac_0.8%	Correlation coefficient Significance Level P n		0.646 0.0021 20	0.920 <0.0001 20	0.733 0.0002 20	0.845 <0.0001 20	0.657 0.0016 20	0.836 <0.0001 20	0.506 0.0228 20
RE_TOF_100%_mac_1%	Correlation coefficient Significance Level P n	0.646 0.0021 20		0.724 0.0003 20	0.944 <0.0001 20	0.614 0.0039 20	0.773 0.0001 20	0.708 0.0005 20	0.722 0.0003 20
RE_TOF_50%_mac_0.8%	Correlation coefficient Significance Level P n	0.920 <0.0001 20	0.724 0.0003 20		0.775 0.0001 20	0.760 0.0001 20	0.767 0.0001 20	0.888 <0.0001 20	0.685 0.0009 20
RE_TOF_50%_mac_1%	Correlation coefficient Significance Level P n	0.733 0.0002 20	0.944 <0.0001 20	0.775 0.0001 20		0.712 0.0004 20	0.754 0.0001 20	0.786 <0.0001 20	0.688 0.0008 20
SE_TOF_100%_mac_0.8%	Correlation coefficient Significance Level P n	0.845 <0.0001 20	0.614 0.0039 20	0.760 0.0001 20	0.712 0.0004 20		0.688 0.0008 20	0.888 <0.0001 20	0.584 0.0069 20
SE_TOF_100%_mac_1%	Correlation coefficient Significance Level P n	0.657 0.0016 20	0.773 0.0001 20	0.767 0.0001 20	0.754 0.0001 20	0.688 0.0008 20		0.748 0.0001 20	0.900 <0.0001 20
		SE_TOF_50%_mac_0.8%	Correlation coefficient	0.836 <0.0001 20	0.708 0.0005 20	0.888 <0.0001 20	0.786 <0.0001 20	0.888 <0.0001 20	0.748 0.0001 20

	Significance Level P n	001 20		001 20		001 20			
SE_TOF_50%_mac_1%	Correlation coefficient Significance Level P n	0.506 0.0228 20	0.722 0.0003 20	0.685 0.0009 20	0.688 0.0008 20	0.584 0.0069 20	0.900 <0.0001 20	0.686 0.0008 20	

Table (3): Group R who received Rocuronium

		RE_TO F_100% _mac_0 .8%	RE_TO F_100 %_mac _1%	RE_TO F_50% _mac_0 .8%	RE_T OF_50 %_ma c_1%	SE_TO F_100 %_mac _0.8%	SE_TO F_100 %_mac _1%	SE_TO F_50% _mac_ 0.8%	SE_TO F_50% _mac_ 1%
RE_TO F_100% _mac_0 .8%	Correlation coefficient Significance Level P n		0.800 <0.0001 1 20	0.932 <0.0001 1 20	0.842 <0.0001 1 20	0.897 <0.0001 20	0.760 0.0001 20	0.897 <0.0001 1 20	0.770 0.0001 20
RE_TO F_100% _mac_1 %	Correlation coefficient Significance Level P n	0.800 <0.0001 20		0.869 <0.0001 1 20	0.946 <0.0001 1 20	0.893 <0.0001 20	0.929 <0.0001 1 20	0.889 <0.0001 1 20	0.934 <0.0001 1 20
RE_TO F_50% _mac_0. 8%	Correlation coefficient Significance Level P n	0.932 <0.0001 20	0.869 <0.0001 1 20		0.856 <0.0001 1 20	0.871 <0.0001 20	0.814 <0.0001 1 20	0.933 <0.0001 1 20	0.811 <0.0001 1 20
RE_TO F_50% _mac_1 %	Correlation coefficient Significance Level	0.842 <0.0001 20	0.946 <0.0001 1 20	0.856 <0.0001 1 20		0.926 <0.0001 20	0.931 <0.0001 1 20	0.863 <0.0001 1 20	0.960 <0.0001 1 20

	P n								
SE_TO F_100% _mac_0 .8%	Correl ation coeffic ient Signifi cance Level P n	0.897 <0.0001 20	0.893 <0.000 1 20	0.871 <0.000 1 20	0.926 <0.000 1 20		0.867 <0.000 1 20	0.908 <0.000 1 20	0.850 <0.000 1 20
SE_TO F_100% _mac_1 %	Correl ation coeffic ient Signifi cance Level P n	0.760 0.0001 20	0.929 <0.000 1 20	0.814 <0.000 1 20	0.931 <0.000 1 20	0.867 <0.0001 20		0.860 <0.000 1 20	0.946 <0.000 1 20
SE_TO F_50% _mac_0. 8%	Correl ation coeffic ient Signifi cance Level P n	0.897 <0.0001 20	0.889 <0.000 1 20	0.933 <0.000 1 20	0.863 <0.000 1 20	0.908 <0.0001 20	0.860 <0.000 1 20		0.832 <0.000 1 20
SE_TO F_50% _mac_1 %	Correl ation coeffic ient Signifi cance Level P n	0.770 0.0001 20	0.934 <0.000 1 20	0.811 <0.000 1 20	0.960 <0.000 1 20	0.850 <0.0001 20	0.946 <0.000 1 20	0.832 <0.000 1 20	

In conclusion, our study showed that RE and SE values decreased with increases in isoflurane concentration. Neuromuscular blockade did not affect spectral entropy without noxious stimulus.