

Nebulized ketamine decreases incidence and severity of post-operative sore throat

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Background and Aims:

Post-operative sore throat (POST) occurs in 21-65% of patients. Ketamine used earlier as gargle for reducing POST has limitations. The aim of this study was to see if nebulised ketamine reduces POST.

Methods:

We conducted a prospective, randomised, placebo-control, and double-blind controlled trial. After written informed consent, 100 patients belonging to American Society of Anaesthesiologists physical status I-II in the age group 20-60 years, of either sex undergoing surgery under general anaesthesia (GA) were enrolled. Patients were randomised into two groups; group saline (S) received saline nebulisation 5.0 ml and group ketamine (K) received ketamine 50 mg (1.0 ml) with 4.0 ml of saline nebulisation for 15 min. GA was induced 10 min after completion of nebulisation in the patients. The POST and haemodynamic monitoring were done pre-nebulization, pre-induction, on reaching post-anaesthesia care unit, and at 2, 4, 6, 8, 12 and 24 h post-operatively. POST was graded on a four-point scale (0-3).

Results:

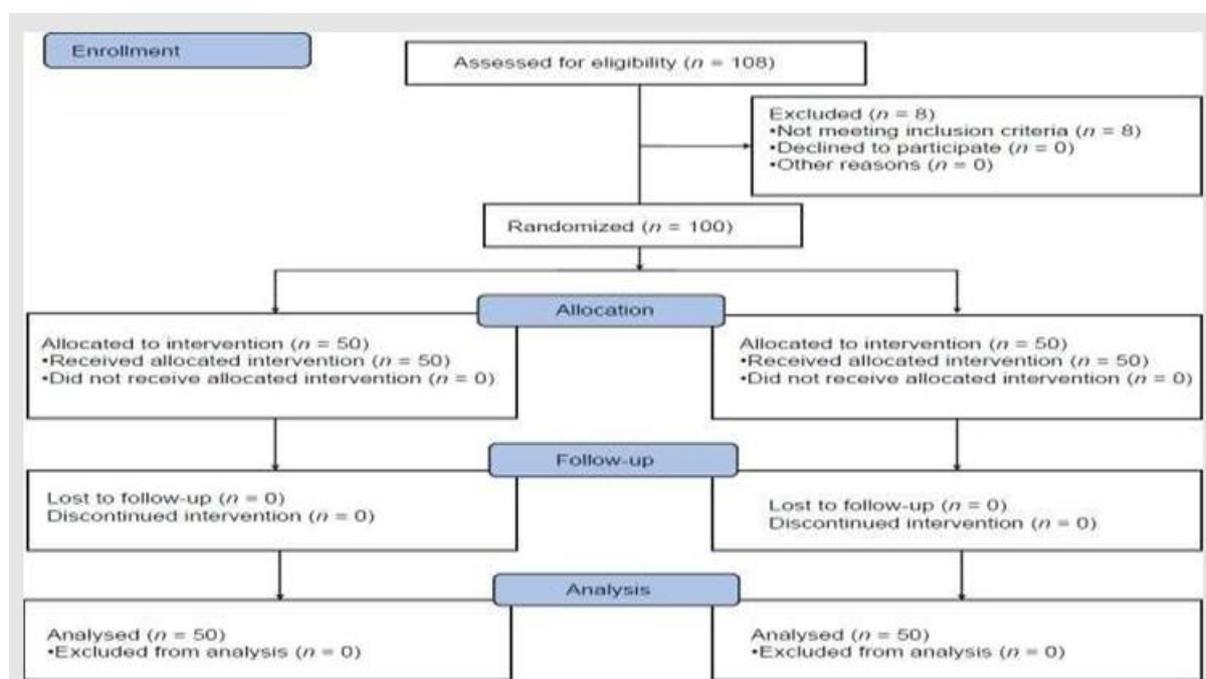
The overall incidence of POST was 33%; 23 patients (46%) in saline and 10 patients (20%) in ketamine group experienced POST (Fisher's exact $P = 0.01$). The use of ketamine nebulization attenuated POST at 2 h and 4 h post-operatively ($P < 0.05$). The primary outcome was incidence of POST at 4 h; 13 patients in group S versus 4 patients in group K ($P = 0.03$) experienced POST at 4 h. The moderate sore throat occurred in 6 patients in group S and none in group K at 2 h, post-operatively ($P = 0.02$).

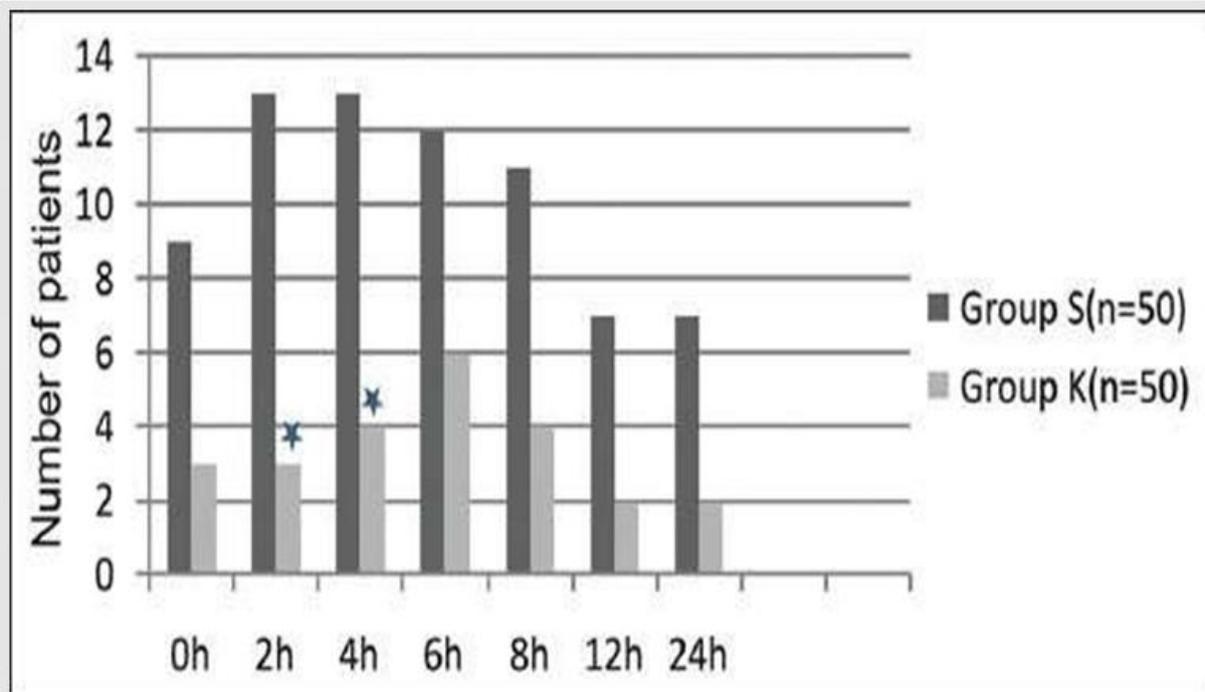
Conclusion:

Ketamine nebulization significantly attenuated the incidence and severity of POST, especially in the early post-operative period, with no adverse effects.

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Characteristics	Group S (n=50)	Group K (n=50)
Age (years)	42.6 (15.1)	40.1 (13.2)
Weight (kg)	60 (9.7)	60 (13.1)
Male (%)	36 (72)	30 (60)
Duration of surgery (min)	54 (5)	55 (6)

Data expressed as mean (standard deviation) or numbers (%)

Time	POST score	Group S (n=50)	Group K (n=50)
Immediate	1	7	3
recovery (0 h)	2	2	0
2 h	1	7	3
	2	6	0*
4 h	1	8	3
	2	5	1
6 h	1	9	5
	2	3	1
8 h	1	10	4
	2	1	0
12 h	1	5	2
	2	2	0
24 h	1	5	2
	2	2	0

Data expressed as number of patients. * $P < 0.05$ on between group comparison considered statistically significant. POST – Post-operative sore throat

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