ABSTRACT

THE DIFFERENCE OF EFFECT ISOTONIC NASAL SALINE IRRIGATION SOLUTION AND HYPERTONIC SALINE SOLUTION ABOUT NASAL MUCOCILIARY CLEARENCE TIME AND SNOT-20 SCORE OF CHRONIC RHINOSINUSITIS PATIENT

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Objective: Chronic rhinosinusitis (CRS) is a chronic inflammation of the nasal mucosa and paranasal sinuses. As many as 50% of the selected CRS patient population has received maximum medical treatment but does not improve and surgery is required. Nasal irrigation is a therapy of patients with CRSs rather than intranasal corticosteroids that improve the function of nasal mucosa. Commonly used irrigation solutions include isotonic and hypertonic salt solutions. The selection of these two solutions is often a matter of debate. The severity of CRS symptoms can be evaluated comprehensively by measuring descent mucociliary clearance time, while subjectively based on the Sino-Nasal Outcome Test score 20 (SNOT-20).

Study design: Experimental study with double blinding pretest-posttest, non-equivalent control group design.

Methods: The study was conducted from July until the time of presentation at the Rhinollogy division of ORL-HNS OPD Dr. Soetomo General Hospital Surabaya. The study was randomized clinical trials in the two group with isotonic as control group.

Result: The mean descent (Δ) mucociliary time clearance of isotonic group -0.17 (SD 2.13) and hypertonic group -5.68 (SD 4.17). The statistical test of the descent (Δ) mucociliary clearance time was obtained significantly different with p = 0.000. Mean descent (Δ) SNOT-20 score of isotonic groups -0.93 (SD 16.92) and hypertonic group -17.13 (SD 8.26). The statistical test of the descent (Δ) SNOT-20 score was obtained have significantly different result p = 0.000.

Conclusion: Difference effect of nasal isotonic salt irrigation compared with hypertonic mucociliary clearance time and SNOT-20 in CRS patients. Irrigation of hypertonic saline solution in CRS was better at decreasing mucociliary clearance time and SNOT-20 score compared with isotonic salt solution.

Keywords: isotonic nasal saline irrigation, hypertonic nasal saline irrigation, mucociliary clearance, Sino-Nasal Outcome Test score 20 (SNOT-20), chronic rhinosinusitis.