

# A Comparison between Mygind and Kaiteki positions in administration of drops to the olfactory cleft

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## Abstract

**Objectives:** Systemic steroids are a well-known, proven treatment for olfaction impairment. Topical nasal steroids are an attractive alternative that avoids systemic side effects and might provide an increased local drug activity. Nonetheless, the access of the medication to the olfactory cleft (OC) by using low- volume devices, such as nasal drops, is greatly dependent on the position of the head. We aimed to examine the accessibility of nasal drops to the OC area in two different head positions: the Mygind (lying head back) position and the Kaiteki position. **Design and Setting:** This is a cadaver study; the specimens were firstly positioned in Mygind and thereafter in Kaiteki positions. Nasal drops mixed with blue food dye were administered into the nostril in each head position. Endoscopic videos were recorded, and two blinded observers scored the extent of olfactory cleft penetration (OCP) using a 4-point scale (0 = none, 3 = heavy). **Participants:** Twelve fresh-frozen cadaver specimens **Main outcome measures:** The dye's penetration to the OC **Results:** The mean score of nasal drops penetrance to the OC in the Mygind position was 1.34, as compared to 1.76 in the Kaiteki position. The difference in the OCP score between the two groups was not statistically significant ( $p > 0.05$ ) **Conclusion:** Both Mygind and Kaiteki head positions are reasonable alternatives in treatment with nasal drops for olfaction impairment. The preference of one position over another should rely on the patient's comfort.

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Figure 1

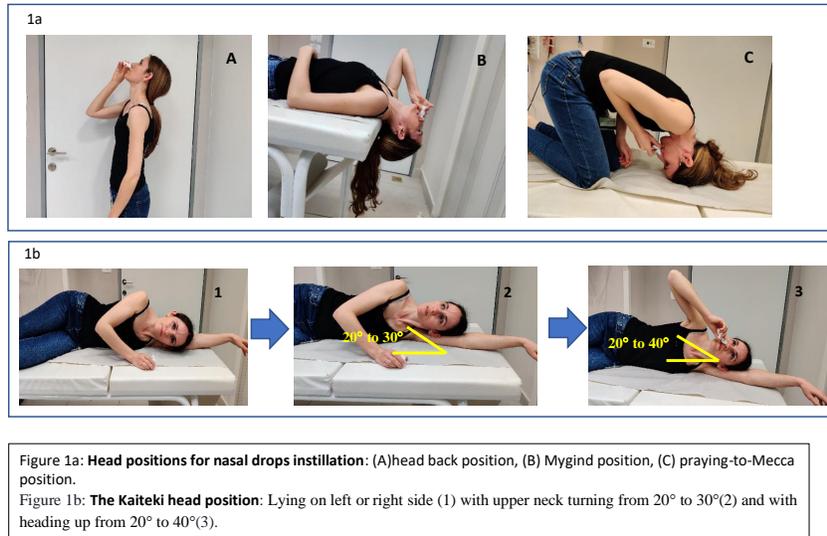


Figure 2

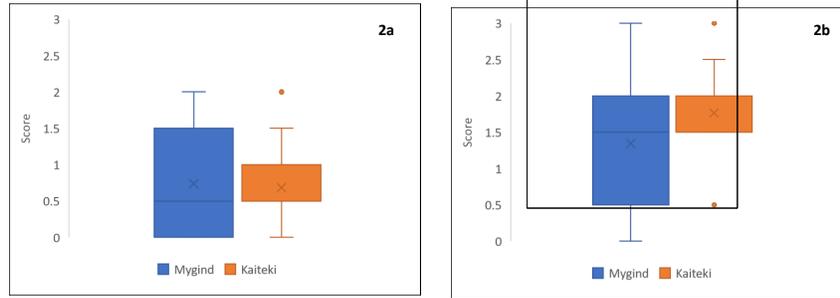


Figure 2a: **Olfactory cleft penetration score in Mygind Vs Kaiteky head positions:** In both head positions there was a considerable penetrance of dye to the olfactory cleft area with a mean score of 1.34 in the mygind position and 1.76 in the kitakei position. There was not a statistically significant difference between the two positions.

Figure 2b: **OMC penetration score in Mygind Vs Kaiteky positions:** The penetration scores to the OMC in the two head positions were 0.73 in the Mygind position and 0.68 in the Kaiteki position, without statistically significant difference ( $P>0.05$ )