

TOPICAL INTRANASAL CO-PHENYLCAINE AFFECTS OLFACTORY ASSESSMENT

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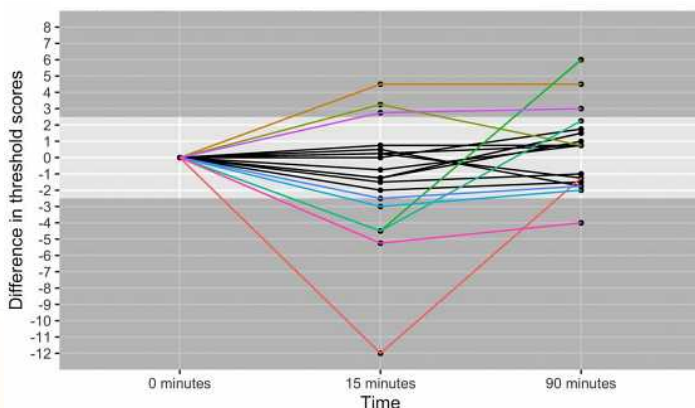
Background

With an increasingly healthy population focused on improving quality of life, and the recent COVID-19 pandemic with its high prevalence of COVID-19 associated olfactory dysfunction, there has been renewed interest and awareness in olfactory disorders. Patients presenting to our clinic with olfactory dysfunction are first evaluated with nasoendoscopy to exclude any sinonasal pathology, before a Sniffin' Sticks (SS) test is performed to grade their olfactory function.

Topical intranasal co-phenylcaine, comprising a decongestant (phenylephrine) and an anaesthetic (lidocaine), is commonly used prior to nasoendoscopic evaluation of olfactory dysfunction. However, its effect on subsequent olfactory assessment is unclear. This pilot aims to study 1) if topical intranasal co-phenylcaine affects olfactory assessment and 2) how long its effects last for.

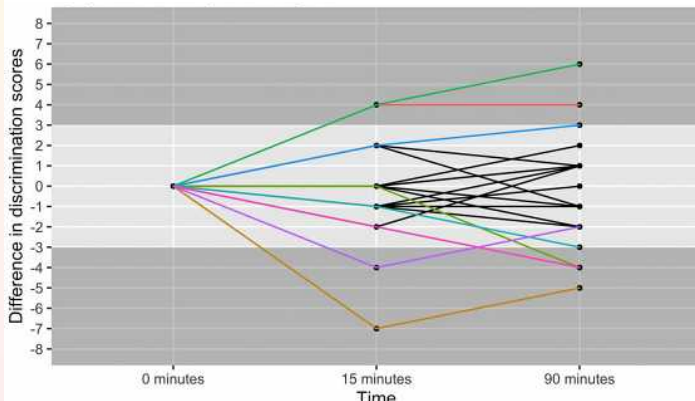
(1a) Difference in SS Threshold scores from baseline.

Coloured lines indicate participants with changes surpassing MCID at 15 or 90 minutes



(1b) Difference in SS Discrimination scores from baseline.

Coloured lines indicate participants with changes surpassing MCID at 15 or 90 minutes



Methodology

20 adults with no self-reported smell loss, sinonasal disease or prior nasal surgery were recruited to our study voluntarily. They underwent SS Threshold and Discrimination olfactory assessment and nasoendoscopy at baseline, at 15 minutes and at 90 minutes after intranasal co-phenylcaine was administered.

The maximum score is 16 for each SS component, with higher scores indicating better olfactory function. The Minimal Clinically Important Difference (MCID) of the SS test was defined as 2.5 points for Threshold testing and 3 points for Discrimination testing.



Sniffin' Sticks test

Results

As a cohort, the mean SS Threshold score was 12.8 ± 3.5 pre-spray, 11.4 ± 4.6 15 minutes post-spray and 13.3 ± 2.8 90 minutes post-spray ($p=0.04$). Though statistically significant the change in scores did not meet MCID. The mean SS Discrimination score was 12.1 ± 1.4 pre-spray, 11.8 ± 2.0 15 minutes post-spray and 11.8 ± 2.8 90 minutes post-spray ($p=0.84$).

Individually, however, 45% of participants experienced changes in SS Threshold scores meeting MCID at 15 minutes post-spray and 20% of participants experienced changes persisting till 90 minutes post-spray (Chart 1a). 20% of participants experienced changes in SS Discrimination scores meeting MCID at 15 minutes post-spray and 35% of participants experienced changes in Discrimination scores meeting MCID at 90 minutes post-spray (Chart 1b).

Discussion

Administration of topical intranasal cophenylcaine has a clinically significant impact on olfactory assessment and can last beyond 90 minutes. This is in contrast to the available literature. Clinicians should avoid using co-phenylcaine if intending to proceed with olfactory assessment.