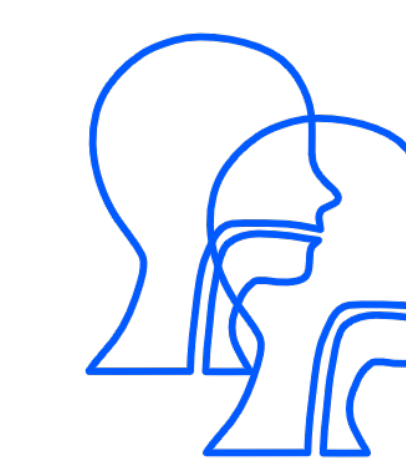


Is There a Recency Effect During Visuoperceptual FEES Analysis?

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BACKGROUND

- Visuoperceptual ratings of the amount of airway invasion on FEES are common practice in research and clinical care^{1,2}.
- A recency effect refers to the phenomenon where a decision is influenced by the most recent exposure.
- In the voice literature, a recency effect has been established during auditory-perceptual evaluations of voice quality^{3,4}.
- However, it is unknown if raters are prone to a recency bias during visuoperceptual FEES analysis.
- This study aimed to examine whether prior exposure to a swallow (either mild or severe) affected laryngeal vestibule ratings for the next swallow.

METHODS

- Eight FEES-trained speech-language pathology master's students rated the amount of penetrant residue within the laryngeal vestibule on FEES using a 100-point visual analog scale^{4,5}

None ————— Complete

- Ratings consisted of 3 blocks of 20 FEES video clips
 - 20 "clustered" mild swallows ($M_{VAS} = 11.40$)
 - 20 "clustered" severe swallows ($M_{VAS} = 62.25$)
 - 40 "alternating" mild/severe swallows repeated from the aforementioned blocks.
- Each block was rated one week apart, and the order was randomized across raters.
- Linear mixed models and paired equivalence tests determined if VAS ratings for mild and severe swallows were the same or different when rated as clustered or alternating blocks.

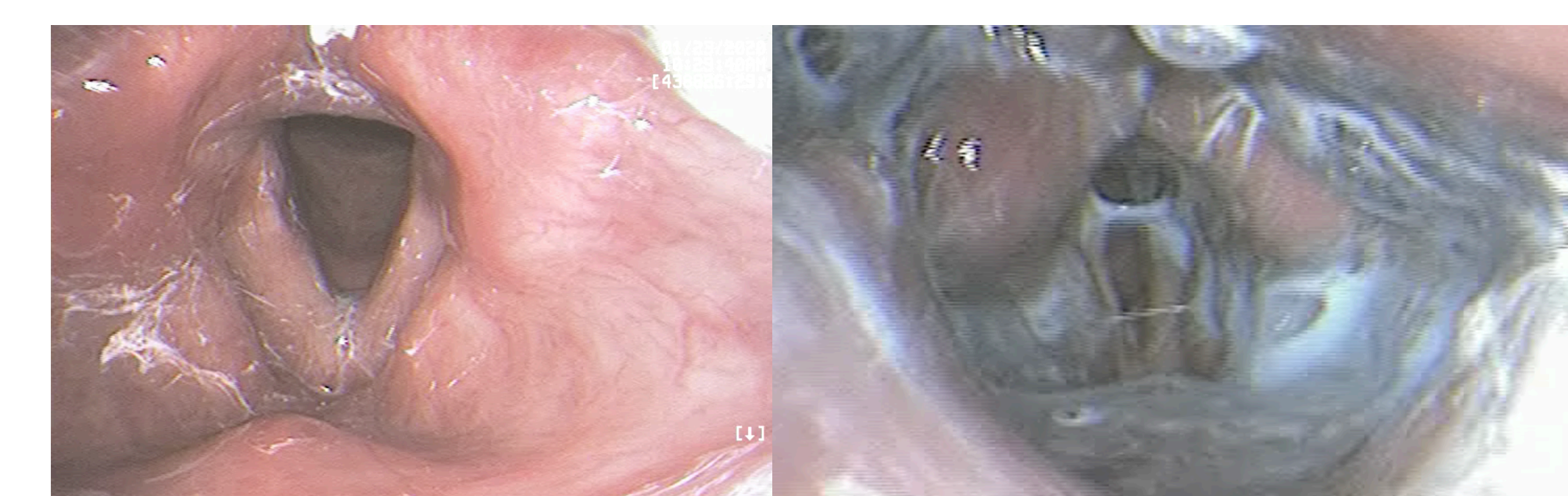
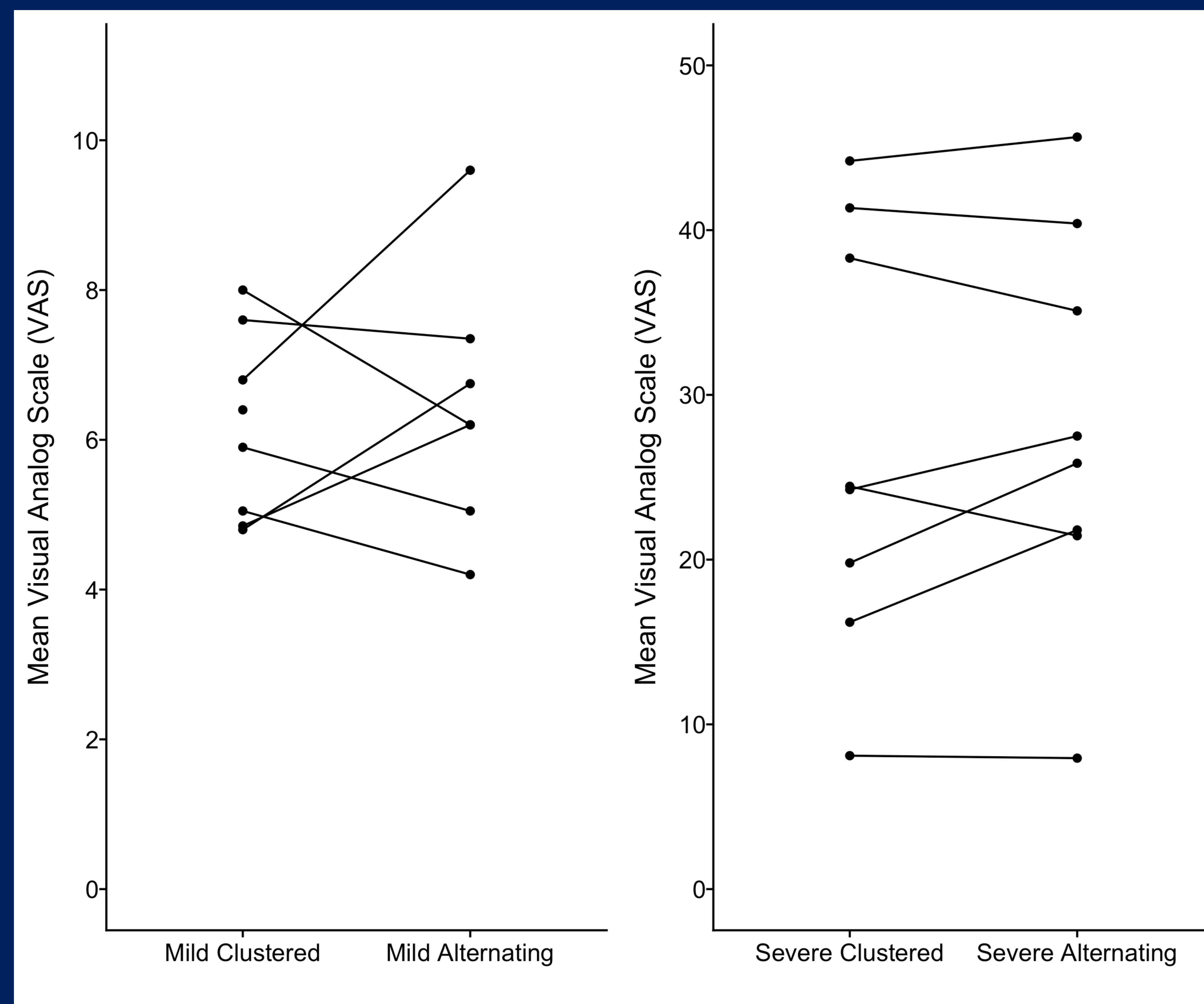


Figure 1: Examples of 'Mild' (left) and 'Severe' (right) laryngeal vestibule residue

Ratings of laryngeal vestibule residue were **not affected** by prior exposure to mild or severe swallows

Figure 2: Mean Change in VAS Ratings between "Clustered" and "Alternating" Ratings



RESULTS

- Average VAS ratings for mild clustered swallows was 6.18 (SD = 4.99) and mild alternating swallows was 7.49 (SD = 6.34), whereas severe clustered was 27.10 (SD = 19.90) and severe alternating swallows was 28.20 (SD = 19.80).
- There was no significant recency effect of exposure to a severe ($p = .72$) or mild ($p = .96$) swallow on subsequent laryngeal vestibule ratings (Fig 2).
- Both severe ($p < .001$) and mild ($p = .034$) clustered ratings were statistically equivalent to their alternating counterpart, providing evidence for the null hypothesis of no difference.

CONCLUSIONS

- Visuoperceptual analyses of laryngeal vestibule residue were not affected by prior exposure to mild or severe swallows, suggesting that trained raters are not prone to a recency effect when rating laryngeal vestibular residue with a visual analog scale.
- These null findings may be related to differences in rating methods compared to the recency effect in other fields; specifically, a visual analog scale to rate the amount of material covering a structure may be a more objective method compared to formulating a gestalt clinical impression of severity.
- Future research should explore the recency effect with expert clinicians, in the context of other anatomic landmarks, and between more subtle differences in rating severities (e.g., mild and moderate).

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