

## 5<sup>th</sup> INTERNATIONAL CONFERENCE ON DENTISTRY AND ORAL HEALTH

April 28-29, 2025 | VIENNA, AUSTRIA



**Ren Zhen**

Peking University School of stomatology, Beijing, China

### The Role of EGG in Identifying Prevocalic Glottal Stop

#### Abstract:

**Objective:** The aim of the study is to investigate the use of incidences and characteristics of Prevocalic Electroglottographic Signal (PVES) derived from electroglottography (EGG) in characterizing glottal stops (GS) in cleft palate speech.

**Methods:** Mandarin nonaspirated monosyllabic first-tone words were used for the speech sampling procedure. A total of 1680 utterances (from 83 patients with repaired cleft palates) were divided into three categories based on the results of auditory-perceptual evaluation of recorded speech sounds by three independent reviewers: [Category A (absence of GS agreed by all three reviewers) (n = 1192 tokens), Category B (two out of three reviewers agreed on the presence of a GS) (n = 181 tokens) and Category C (all three reviewers agreed on the presence of a GS) (n = 307 tokens)]. The EGG signals of the 1680 utterances were analyzed using a MATLAB program to automatically mark the instances of PVES (amplitude and time-interval) in the GS utterances.

**Results:** The result showed that the incidence of EGG PVES presented good positive correlation with auditory-perceptual evaluation ( $r = 0.703$ ,  $P < 0.000$ ). Statistical analysis revealed a significant difference in mean PVES amplitude among different groups ( $P < 0.05$ ). There was a significant distinction in the time interval between groups A and B, as well as in groups A and C ( $P < 0.05$ ).

**Conclusions:** The study suggests PVES can be an objective means of identifying GS in cleft palate speech. It also indicates that proportion of amplitude and time interval of PVES tend to be positively correlate with subjective assessment.

**Biography:** Ren Zhen, Medical doctor & Attending Physician, graduated from Peking University School and Hospital of Stomatology in 2018, majoring in Oral and Maxillofacial Surgery. Her expertise covers diagnosing and treating various oral - maxillofacial conditions. Notably, she focuses on cleft palate speech research.