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Intraglottal pressure distributions for oblique glottal angles

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Asymmetric vocal fold oscillation occurs for both normal and pathological phonation. The pressures on the right and left glottal walls receive different pressures when the glottis is oblique, as we have shown previously. Different driving forces may affect the motion, although to what extent is not yet known. We have continued empirical modeling of various oblique glottal shapes using a Plexiglas model (M5), and report the findings of those studies. In general, an oblique glottis tends to receive higher pressures on the more convergent side, and the cross-channel pressure differences may shift polarity between upstream and downstream sections. The effects on intraglottal pressures for a wide range of obliquity, minimal glottal diameter, transglottal pressure, and included glottal angle will be shown and discussed relative to potential oscillatory effects. [supported by NIH R01DC03577]