

Voice Prosthesis Troubleshooting:

Critical thinking and
practical solutions

Lisa Evangelista, CScD, CCC-SLP, BCS-S
University of California, Davis Health System
Department of Otolaryngology-Head & Neck Surgery



History

67-year-old male

T4aN2bM0 SCCa of
the larynx

Total laryngectomy
in 2020

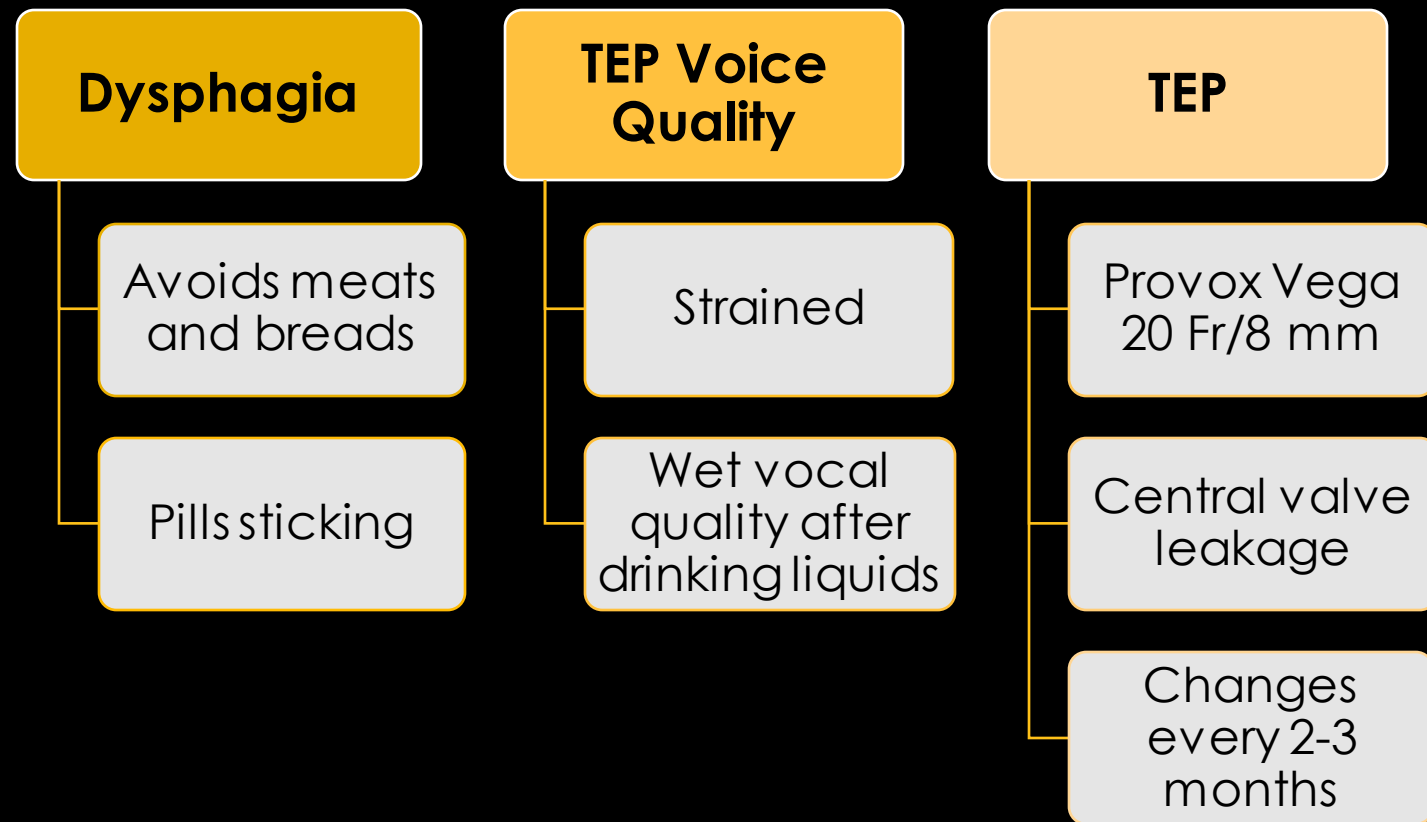
Adjuvant radiation
therapy

Secondary TEP

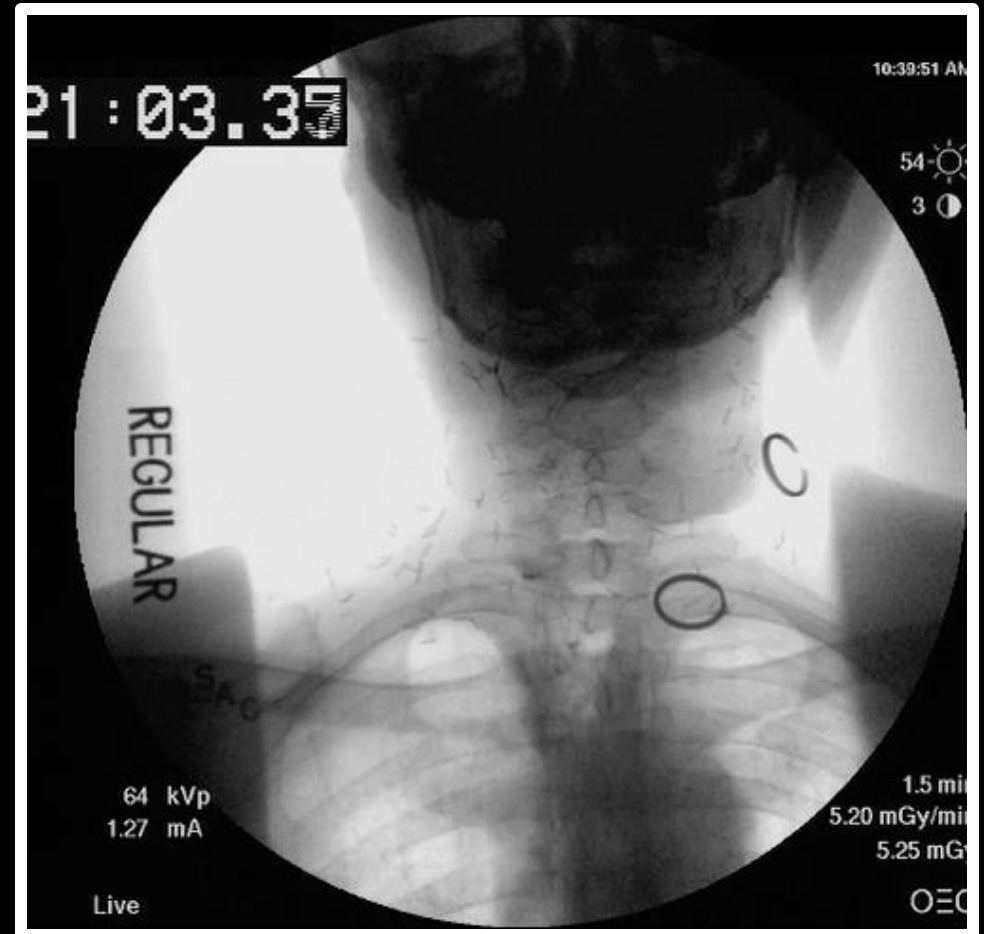
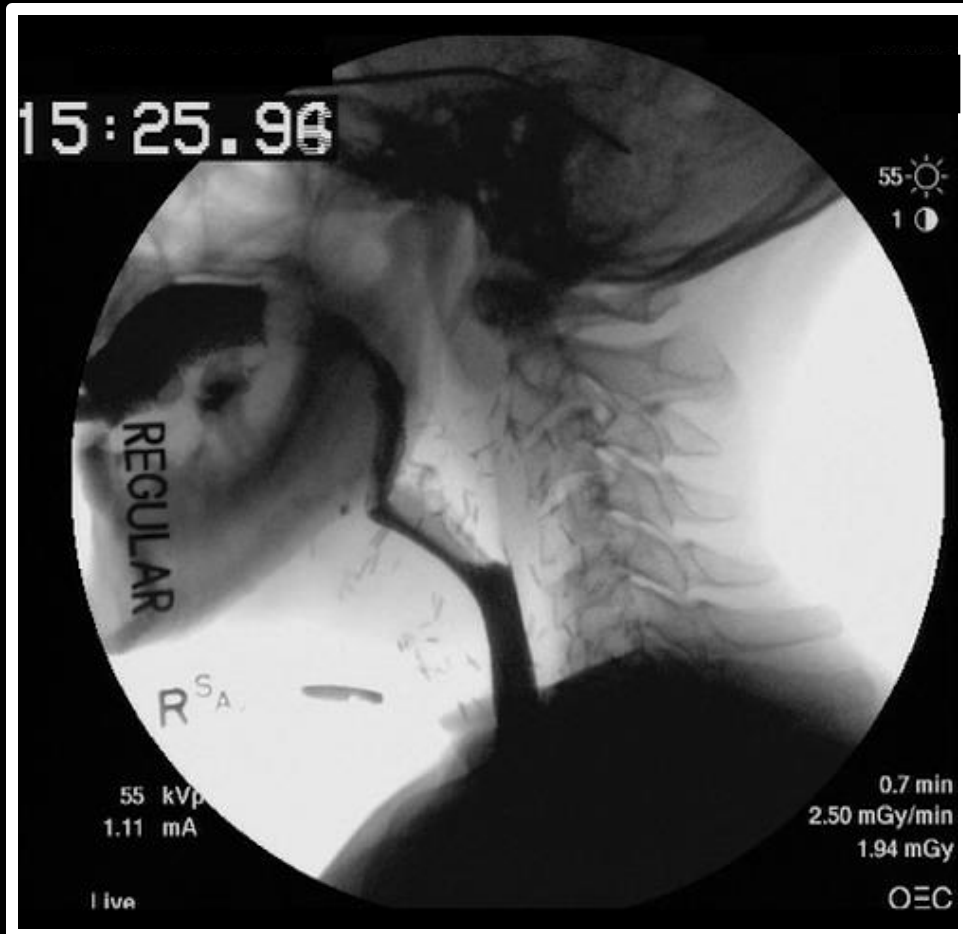
Reports difficulties
with TEP speech



Current Presentation

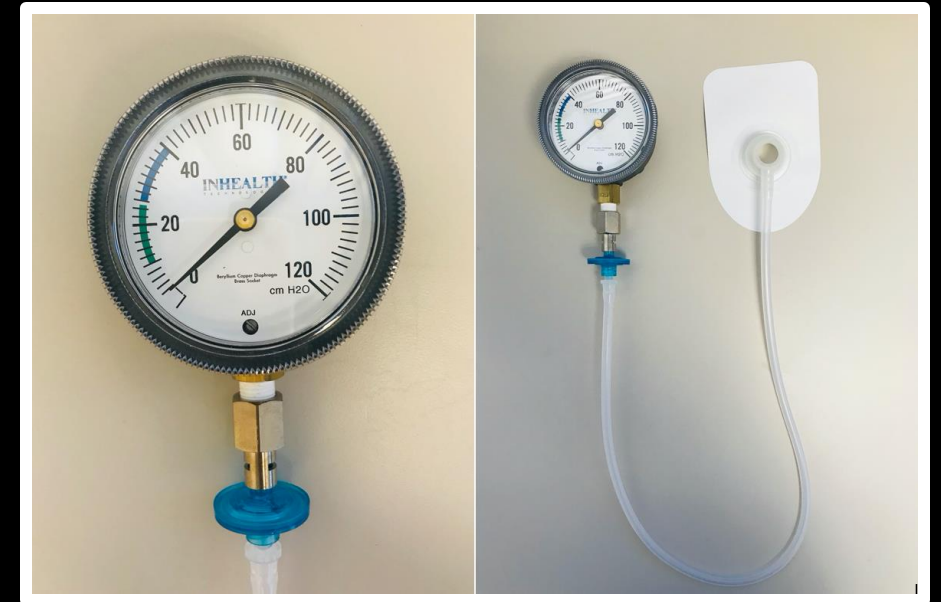


Videofluoroscopy



TEP Voice Quality

Task	Intratracheal Manometry
Sustained phonation	82 cm H ₂ O
Conversational speech	73 cm H ₂ O
Maximum loudness	87 cm H ₂ O
Maximum phonation duration	3 seconds



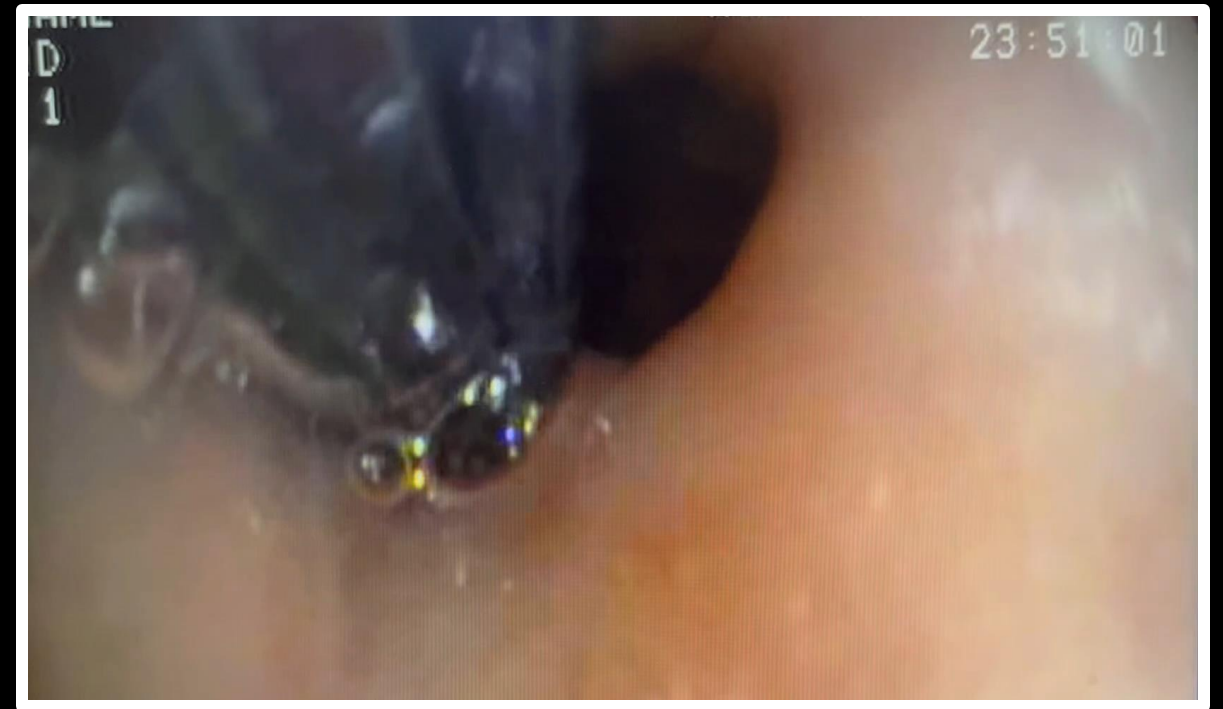
Management

Repeat esophageal dilations

Single balloon dilation

Double balloon dilation

Maintenance of esophageal patency



Management

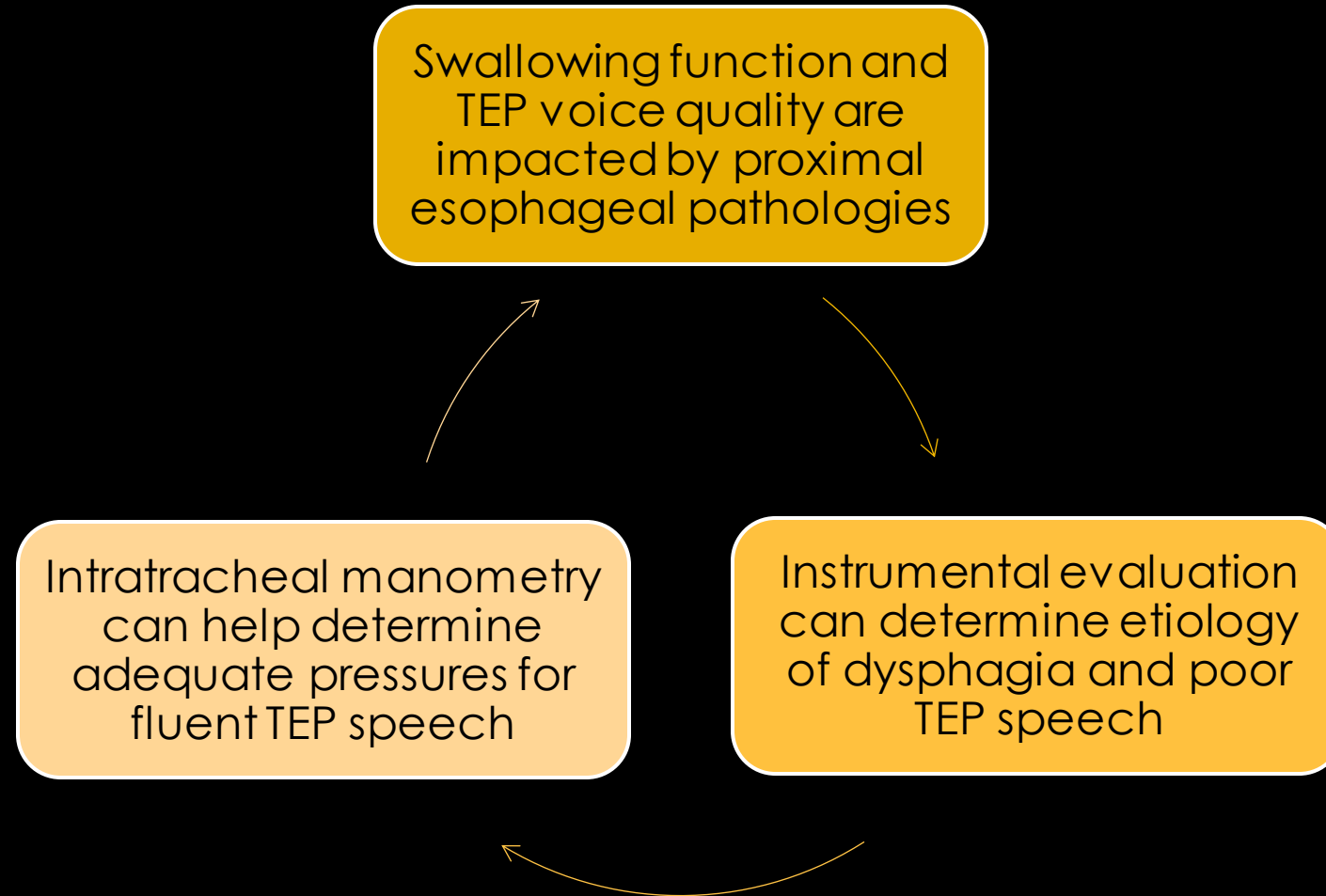
- Biofeedback with intratracheal manometer
 - Goal of < 40 cm H₂O

Task	Intratracheal Manometry
Sustained phonation	38 cm H ₂ O
Conversational speech	36 cm H ₂ O
Maximum loudness	65 cm H ₂ O
Maximum phonation duration	10 seconds

Evangelista, L., Andrews, T., Nativ-Zeltzer, N., Nachalon, Y., Kuhn, M., & Belafsky, P. (2021). Association of Functional Outcomes in Tracheoesophageal Voicing With Intratracheal Pressures and Esophagram Findings. *JAMA Otolaryngology-Head & Neck Surgery*, 147(12), 1065-1070.



Troubleshooting Takeaways



Thank You



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evangelista@ucdavis.edu

