Virtual follow-up after velopharyngeal insufficiency surgery in an international patient

Daniel L Pelzman¹ and Andrew R Scott MD²

¹Tufts University School of Medicine – Boston, MA
²Department of Otolaryngology & Pediatric Facial Plastic Surgery

Floating for Children at Tufts Medical Center, Tufts University School of Medicine - Boston MA

INTRODUCTION

Children affected by cleft palate require multispecialty medical care for many years and may have adverse social, developmental, and educational outcomes compared to unaffected peers. An essential component of this care involves long term follow-up for any speech or language concerns. Traditional objective speech assessments are performed as face-to-face encounters. Though ideal, such evaluations are not always logistically possible, especially among patients living in rural areas or abroad.

However, as of yet, no studies have revealed whether recorded audio files alone (i.e. not videoconferencing) can be a similarly effective tool in the management of cleft palate patients. Here, we discuss the case of a patient whose progress is being monitored remotely through a series of biannual audio recordings sent via email.

CASE REPORT

The mother of a 4-year-old Portuguese girl with a history of non-syndromic incomplete cleft palate self-referred to our cleft team after learning of our program through a family friend. After an exchange of correspondence reviewing the child’s medical diagnosis and the opinions of local providers, the family was able to arrange for a 2 week trip to the United States. In order to streamline the process of evaluation and surgical intervention, a clinic visit for objective speech assessment and pre-operative counseling was scheduled the day prior to an anticipated surgical intervention. A postoperative visit with nasopharyngoscopy was also scheduled for 10 days following surgery.

Upon presenting for an in-person evaluation, the child’s medical history was notable for an isolated soft palate cleft, which had been repaired at 6 months of age. Following that surgery, she continued to have hypernasal speech and consequently was enrolled in local speech therapy for the next 1.5 years. She had no significant otologic history but she had nightly snoring. Examination was notable only for 3+ tonsil hypertrophy and a short soft palate with a clear zone of dehiscence at the base of the uvula. Audiogram was normal. Flexible fiberoptic nasal endoscopy revealed a posterior midline notch and superolateral displacement of the palate in the region of the superior t nonsilars (Figure 1A). There was no closure with P, B, K, or S sounds. Given these findings, secondary Furlow palatoplasty with sphincter pharyngoplasty and concurrent tonsillectomy was recommended. The surgery was performed the following day without complication. At the 10 day follow-up, office exam showed the increased palatal length and nasopharyngoscopy confirmed improved velopharyngeal closure (Figure 1B). As the child was unable to continue with any form of long term follow up in our clinic, the decision was made to continue monitoring her progress remotely, using audio recordings to demonstrate her linguistic capabilities. She continued with speech therapy locally and sent us serial recordings every 6 months over the following 2 years. A timeline of her evaluation and postoperative care is presented in Figure 2.

CASE REPORT (cont.)

CONCLUSIONS

Telemedicine may be a particularly effective means of providing speech therapy services to cleft palate patients in underserved areas with high levels of patient and family satisfaction. Our study shows that using simple audio recordings, however, may also be an effective way to monitor speech progress. Future work is needed to assess the long-term outcomes and patient/family satisfaction following the use of telehealth services.

DISCUSSION

This study demonstrates the feasibility of using simple audio recordings obtained in a serial fashion to monitor speech outcomes following surgery for velopharyngeal insufficiency. Though few centers have adapted telehealth-based follow-up, recent studies have shown that providing SLP services remotely is efficacious. Real-time videoconferencing, though promising, may be of limited practical use, however, as live video feeds are subject to the reliability of local wi-fi networks and may be associated with frustrating audio and visual interruptions. More basic, asynchronous audio recordings may provide a solution to such instabilities.

REFERENCES