Posterior Pharyngeal Wall Augmentation

Velopharyngeal Insufficiency (VPI)

During normal speech, the soft palate (also called velum) raises and closes against the back wall of the throat (also called pharynx or pharyngeal wall). This closes off the nose from the mouth for speech. If the soft palate is not long enough to firmly close against the back of the throat during speech, sound and air can leak into the nose through the gap. This condition is called velopharyngeal insufficiency (VPI).

VPI can affect resonance, which is the quality of the voice. The voice may sound hypernasal because there is too much sound in the nose during speech. (Hyponasality is the opposite problem. It is due to blockage in the nose and occurs when the person has a bad cold.) VPI can also affect speech sound production. The child may not have enough air pressure in the mouth to make certain speech sounds. Also, a leak of air through the nose may be heard during speech.

To correct VPI for normal speech, the opening between the nose and mouth must be closed. An augmentation with a filler is particularly helpful in closing relatively small velopharyngeal openings.

Procedure

The posterior pharyngeal wall augmentation is done by injecting filler material into the opening area. There are various fillers that can be used, including the child's own fat, collagen, or Deflux®.

What to expect after surgery

The posterior pharyngeal wall augmentation procedure takes about one hour. This is usually done as an outpatient surgery so the child does not need to stay in the hospital. In the first few days after the surgery, the child may complain of a sore throat or mild stiff neck.

Possible complications

Complications are infrequent, but can include infection, gradual movement or shrinkage of the filler, and the need to repeat the procedure several times to get the desired results.

Speech therapy

Surgery makes it possible for the child to close off the nose from the mouth during speech, giving him or her the potential for normal speech. However, speech therapy is usually needed to help the child learn how to use the new structure, and to fix speech errors that were learned before the surgery.

Outcomes

Normal speech can be expected following surgery and speech therapy in 60% to 70% of patients. Sometimes, this procedure needs to done several times to obtain the desired result. It may also need to be repeated after a period of time.

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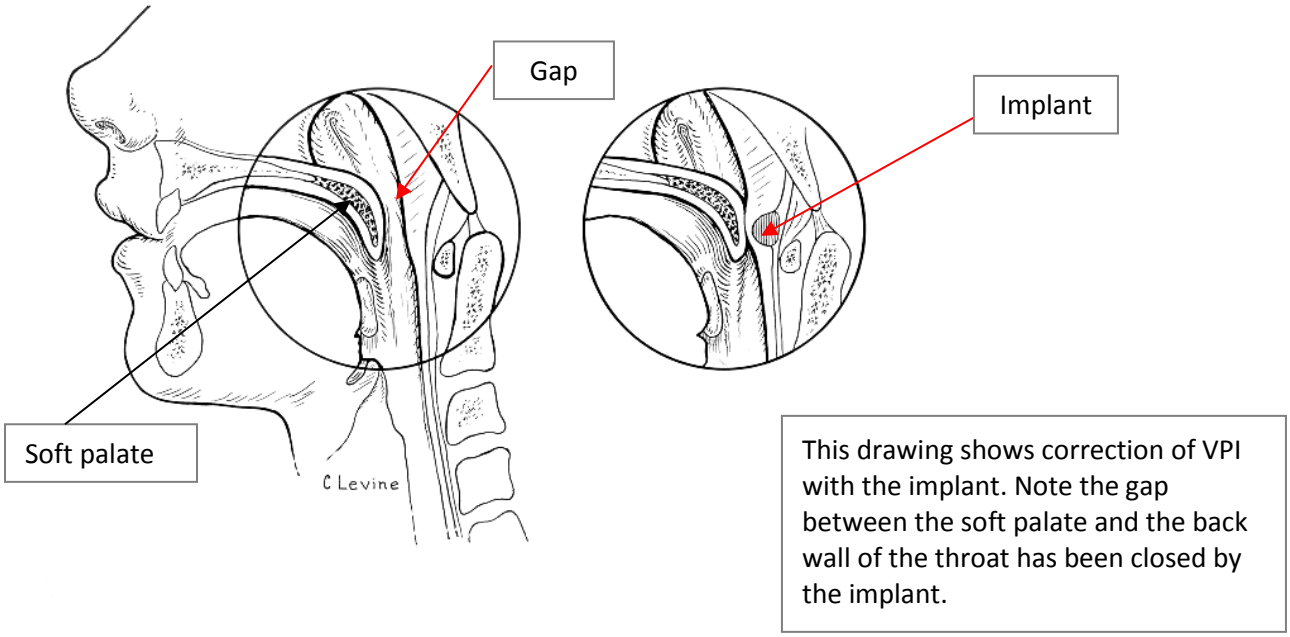
This drawing shows VPI before the implant. Note the gap between the soft palate and the back wall of the throat.



This drawing shows correction of VPI with the implant. Note the gap between the soft palate and the back wall of the throat has been closed by the implant.

Kummer AW. *Cleft Palate and Craniofacial Anomalies: Effects on Speech and Resonance, 3rd Edition*. Clifton Park, NY: Delmar Cengage Learning, 2013.

For more information, please contact the Division of Speech Pathology at (513) 636-4341 or visit our websites at

www.cincinnatichildrens.org/vpi

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