

Submucous Cleft Palate

What is a submucous cleft palate?

A submucous cleft palate is a congenital defect of the palate, which forms the roof of the mouth. The cleft (or opening) is underneath the mucous membrane, which is the tissue that covers the roof of the mouth.

A submucous cleft affects the uvula, which is the long tissue that hangs from the back of the palate. The cleft also goes under part or all of the mucous membrane covering the soft palate (also called velum). In severe cases, the submucous cleft can extend under both the soft and hard palate.

What causes a submucous cleft palate?

As with other types of clefts, a submucous cleft is caused by several factors. In most cases, there is a combination of genetics (inheritance) and environmental factors during the first few weeks of pregnancy. Submucous cleft can occur as part of a genetic syndrome that causes other congenital anomalies. The most common syndromes associated with submucous cleft are Stickler's syndrome and velocardiofacial syndrome (also called 22q.11 deletion syndrome).

The estimated incidence of submucous cleft is 1 in 1200 to 2000 live births. The true incidence is not known, however. This is because many individuals with this condition have no noticeable signs, and so the submucous cleft is not diagnosed.

What are the characteristics of a submucous cleft?

In many cases, the submucous cleft can be seen by looking in the mouth. The uvula may be small, square or bifid (split down the middle). The soft palate may appear to be thin or bluish in color. When the child says "ah," the velum may seem to go up in the shape of a tent. In other cases, the submucous cleft can only be seen by putting a small camera (a "scope") through the nose. This allows the examiner to view the upper side of the velum.



What are the possible effects of a submucous cleft?

In some cases, a submucous cleft can cause difficulty with sucking. As a result, infants may take a long time to feed. They may also have fluid come through the nose occasionally.

The biggest concern with submucous cleft is its possible effect on speech. Most individuals with a submucous cleft have normal speech. However, a submucous cleft can cause velopharyngeal insufficiency (VPI). VPI is a condition where the defect in the velum (soft palate) prevents it from closing against the pharyngeal wall (back wall of the throat) while talking. This can cause hypernasality or nasal air emission during speech.

What is the treatment of a submucous cleft?

If there are no problems with early feeding or speech, then treatment is not necessary. An adenoidectomy (not tonsillectomy) should be avoided, however. This is because children with submucous cleft are at risk for developing speech problems if the adenoids are removed.

If the child with a submucous cleft has hypernasality or nasal emission with speech, the treatment is surgery. Surgery should be done by a specialist who is associated with a cleft palate team. Speech therapy alone cannot eliminate these characteristics because they are caused by abnormal structure. However, speech therapy is often needed after the surgery to correct “compensatory” and other speech errors.

For more information, please contact the Division of Speech Pathology at (513) 636-4341 or visit our website at www.cincinnatichildrens.org/speech.