



Vocal Fold Scar, Sulcus Vocalis, and Mucosal Bridges

Causes

Vocal fold (cord) scar is exactly what it sounds like - i.e. scar tissue. Sulcus vocalis is a term that describes a furrow or pit along the vocal fold edge where it vibrates. A mucosal bridge is a more rare issue that describes a little extra band of the “skin” of the vocal fold which is attached in two places on the vocal fold. These three problems are related because they involve the loss of some tissue in the superficial lamina propria (SLP) which is a layer in the vocal fold that facilitates vibration. Vocal fold vibration is how the vocal fold produces sound (our voice) so when vibration is affected, the voice is abnormal. These problems may arise from voice abuse or overuse, previous breathing tube insertion (like during a surgery), radiation (given for cancer treatment in the head and neck area), inflammation or infection, and in some cases people may be born with a sulcus.

Symptoms, Signs and Diagnosis

Vocal fold scar and sulcus usually cause the voice to be breathy and somewhat weak. Sometimes there are breaks in the voice where no voice comes out. Over time, people sense their voice is weak and start to strain it more to be heard and this creates a more “tight” sounding voice. There are no signs externally since we cannot see our vocal folds. People might experience pain in the neck muscles when talking if they are straining their voice a lot.

Diagnosis can only be made in an otolaryngologist’s (ENT’s) office where there is a videostroboscopy machine which allows us to look at the vibration of the vocal fold. In the case of a scar, sulcus or mucosal bridge, the vibration will be abnormal. In some cases, a trip to the operating room to examine the vocal folds when a person is asleep is the only way to find the scar, sulcus or mucosal bridge.

Treatment

Treatment for these problems is somewhat difficult because we do not have a way to replace the SLP. There are ways that the voice could be made a little better by injecting steroids, breaking up scar tissue, placing an injectable implant which can bring the vocal folds closer together, or placing fat from your own body into the vocal fold in different ways. Sometimes your own skin cells can be harvested and then grown in a lab and then injected back into the vocal fold. There is a lot of research going on in this area so we may be able to inject special growth factors or medications in the future which will help the lost tissue in the scarred area grow back. Sometimes voice therapy is also used to help a person not have to strain so much, usually along with a surgical procedure. These are difficult problems to treat but this should not discourage you from seeking help from an otolaryngologist to improve your voice.