SPEECH AND LANGUAGE ISSUES

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Articulation

Children with CdLS often have difficulties making sounds, a condition speech-language pathologists identify as an articulation disorder. In the context of speech, the term "articulation" refers to structures in the mouth touching or articulating with each other.

We articulate our speech sounds by making precise movements with our articulators—our tongue, teeth, lips, jaw, and soft palate—and coordinate these movements with correct airflow. For example, in order to articulate the "t" sound, we quickly touch and release our tongue tip to the area behind our upper front teeth as we release a puff of air.

An articulation disorder involves mispronouncing speech sounds by omitting, distorting, substituting, or adding sounds, which can make speech difficult to understand. Children with CdLS may say "cak" for "cat," an example of substituting an incorrect sound for the correct one. This particular sound substitution pattern is common in children with CdLS, possibly because most have a retruded lower jaw, meaning that their lower jaw is smaller and placed father back in their mouth in relation to their upper jaw. This structural difference in the jaw also places the tongue farther back in the mouth, contributing to the child's tendency to substitute the "k" consonant for another consonant.

The speech of children with CdLS is often difficult to understand. Mis-articulations are part of the problem, but there are other contributing factors, one of which is the muffling impact of the smaller than normal mouth, or oral cavity. Another factor is the frequent presence of a somewhat harsh voice with lower than normal pitch.

Speech and language are different from each other. Speech is the verbal means of communication. It includes articulation, voice (the sound of your child's voice), and fluency (whether or not your child stutters). Language is the learning of rules for communication, such as the meaning of words and how to put words together.

Speech-language pathologists tend to believe that it's more important to work on language development first and speech development later. Even though your child's speech-language pathologist may tell you that your child has an articulation disorder, she may also tell you that its treatment isn't the primary therapeutic objective. Initially, it's more important that your child have a name for the important people and events in the environment, regardless of how he or she says that name. When it's time

to start the treatment for the articulation disorder, procedures are similar to the treatment process for other children with developmental delays and Childhood Apraxia of Speech.

Childhood Apraxia of Speech

Childhood Apraxia of Speech (CAS) is a motor speech disorder that is very common in children with CdLS. CAS is defined as difficulty saying sounds, syllables, and words in the absence of muscle weakness or paralysis. Reflexive movements of the oral-motor mechanism are intact, but voluntary movements of the oral-motor mechanism are impaired.

Therapists look for the following type of telling behavior: As the child eats, there's no problem with the

reflexive behavior of raising the tongue tip to the upper lip to retrieve food. The therapist then asks the child to imitate her making the same tongue-tip movement. The child with CAS often struggles to imitate this movement and other oral movements that he or she can easily make reflexively. I've often seen facial groping behavior as the child attempts the voluntary behaviors. It's believed that in CAS, the child knows what he or she wants to say but his or her brain has difficulty coordinating the muscle movements necessary to say it.

Children with CdLS typically don't babble as infants, a characteristic they share with children with CAS. It's very unusual for babbling to be absent in infancy. Even deaf children babble during their first year, as do most children with intellectual disabilities. The lack of babbling in CdLS is strongly suggestive of significant brain differences in the area of verbal expression.

Another characteristic of both CAS and CdLS is the "pop-out" or unexpected utterance of a word or short phrase that's perfectly articulated with normal inflection. Occasionally, a child or adult who has never said a word, or only a few words, suddenly says a word perfectly clearly, perhaps one or two times, and then never says that word again.

It's important that the speech-language pathologist who treats your child be aware that your child probably has CAS. CAS requires a different approach for the eliciting of speech and language. The treatment approach I use when treating children with CdLS and CAS starts with gross-motor activities in order to introduce the notion of imitating behavior. This activity also leads to opportunities for praise and shaping other behaviors. The next step is encouraging imitation of a simple syllable, such as "ba," by saying "ba" into a colorful plastic ring. The child holds a plastic ring and, working face-to-face, I say the syllable very slowly with a great deal of inflection and expectantly wait for the child to imitate me.

Once the child is able to imitate the syllable, the process is repeated with the word "baby." Each presentation is repeated 10 to 15 times until the imitation is easy for the child. It's important that the presentation of the syllable or word be said slowly, and the key to slow talking is prolonging the vowel, at least two seconds per syllable. It's also important to use a highly musical inflection pattern with expectant waiting. Give lots of praise for success and for successive approximations of the target behaviors. Gestures facilitate oral communication, and by speaking into a plastic ring, or a toy microphone, or by tapping out each syllable with a tap of the hand, speaking appears to be facilitated.

Selective Mutism

Selective mutism is the total lack of speech in one particular situation, despite the ability to speak in other situations, with duration of this behavior for at least one month. It's assumed that anxiety underlies this behavior and treatment is usually a multidisciplinary approach led by a psychologist. The other members of the team usually include a speech-language pathologist, a teacher and sometimes a social worker.

CdLS Foundation Medical Director Antonie Kline, M.D., and I are interested in discovering if there's a higher than expected incidence of selective mutism in CdLS. We do know of a few young females with CdLS who have selective mutism, but whether the incidence is higher in CdLS than in other syndromes or in the general population is unclear.

Language and speech disorders can exist together or by themselves. The problem can be mild or severe. In any case, a comprehensive evaluation by a speech-language pathologist certified by the American Speech-Language-Hearing Association (ASHA) is the first step to improving language and speech problems.