Rickie

Rickie began a block of therapy at the Nuffield Hearing and Speech Centre, at 5 years. He had had two blocks of therapy at his local clinic previously. He had no difficulties with listening skills, comprehension or expressive language.

Rickie's speech was disordered, and was described by his father as "like a stammerer". His parents were not always able to understand what he said.

Speech assessment

Oro-motor skills

Rickie achieved a range of lip and tongue movements, but had some difficulty with sequencing tasks. His oral/nasal resonance balance was appropriate, and he was able to sustain a vowel with good voice quality. Volume was appropriate, but pitch control was poor, with pitch suddenly shooting up in the middle of phrases.

Rickie's major oro-motor difficulty was in coordinating respiration and phonation, which affected his production of the voiceless plosives /p t k/.

Single sounds

Rickie was able to imitate all vowels and the following consonants:
/b d g m n w l j h ʃ tʃ dʒ/. Voiceless plosives were produced either as clicks or ejectives. The fricatives /f s/ were inaccurate, produced as [ɸ ç] respectively.

CV words

Rickie attempted CV words with his phonetic inventory: words beginning with voiceless plosives were produced with clicks/ejectives. The fricatives /f s/ were produced as [ḍ] and [ɸ͡d] respectively.

Pea → [pʼi]

Pie → [⊙aɪ]

Tea → [l̩i]

Key → [kʼi]

He managed to repeat the same word 3-5 times, but had difficulty with sequences of 2 different CV words.

More complex words

Rickie produced CVC, and CVCV words with the same range of sounds, except that /f s/ were deleted in initial and final positions, and replaced by glottal stop [ʔ] in medial position. Consonant harmony was also noted.

Kite	→	[kʼaɪkʼ]	sun	→	[ʌn]
Sock	→	[kʼɒkʼ]	leaf	→	[li]
Garden	→	[dɑdən]	bus	→	[bʌ]

Multisyllabic words were inaccurate, and also dysrhythmic, due to the effects of the abnormal airstream mechanisms used (i.e. clicks and ejectives). Rickie was able to use initial /bl/ and /gl/ clusters.

Speech processing skills

Rickie showed age appropriate discrimination and phonological awareness. He was able to identify syllable number, and onset and rime. He rejected his own speech production errors.

Diagnosis

Rickie was diagnosed as having a moderate developmental verbal dyspraxia, with an oro-motor component.

He showed a patchy sound system, where a group of early developing sounds had not been acquired. There was a dysrhythmic quality to his speech, due to his use of clicks, ejectives and glottal stops, plus some mild pitch breaks.

Intervention

Rickie attended a block of 20 weekly therapy sessions, at the Nuffield Hearing and Speech Centre, supported by daily practice at home.

Treatment programme

Rickie's patchy profile was well suited to the multi-level, multi-target approach of the Nuffield Dyspraxia Programme:

- Using the sounds Rickie could produce, a wide range of CV, CVCV and CVC words were established.
- These words were then practised in sequencing activities, and at phrase level, incorporating practice of intonation patterns (Stage 2-3 of treatment plans).
- In contrast, Rickie did not have accurate motor programs for /p t k f s/, so therapy for these sounds started at Stage 1, working first on underlying oro-motor skills. He worked on establishing gentle voice (initiating vocalisation with /h/), control of airflow, coordination of airflow and phonation. Intonation patterns were practised with different vowel sounds. Appropriate placement/postures for /p t/ were taught.
- At the same time, Rickie was taught correct motor programs for /f s/, using articulograms to support correct placement and manner.
- /f s/ were then practised in sequences, with little difficulty, and in CV and CVCV words.
- Once Rickie had achieved gentle plosion on /p t k/ he worked on sustaining his motor programs to produce repetitions of these sounds, before extending this to sequences of two sounds.
- A set of contrastive CV words was then established, with /p t k/.

Outcome

Rickie learned to produce /p t k f s/ with accurate motor programs. His use of clicks and ejectives reduced, and the rhythm of his speech improved. He generalised the target sounds to new words with ongoing practice at home. When reviewed 6 months later, he had consolidated his target sounds and his intelligibility was good.