

Ambulatory ADM improves balance and gait of 7 year old with Diplegia



Patient details

Initials: JCDS

Age: 7 years

Gender: Male

Background

JCDS was born 9 weeks prematurely with a severe infection and diagnosed with Diplegia. This is a chronic neuromuscular condition similar to Cerebral Palsy.

JCDS lacks muscle tone and mass, particularly in his right leg and requires regular physiotherapy to improve his strength and balance.

Previous treatments include Botox injections to the calf to improve dorsiflexion. This provided some improvement, but his clinical team felt that more needed to be done to improve dorsiflexion, balance and gait. JCDS was not able to pass natural obstacles so easily when walking, such as a step or a hole in the street. He would tire quickly when participating in sport, such as football and lacked confidence.

JCDS was provided with an Ambulatory Abduction Dorsiflexion Mechanism (ADM) fitted to a black New Balance shoe and neuromuscular tape to improve the position of his knees.

Experience

Since using the Ambulatory ADM his balance has significantly improved and he is much more stable when standing on both feet. When static, he is better able to use both hands for activities such as writing on the school board or playing his Wii. He takes less effort to bypass natural hurdles when walking, such as steps, puddles or holes in the pavement. He also can jump and run more easily. These normal activities of daily living were more difficult prior to using the Ambulatory ADM.

According to his mother, "JCDS feels very comfortable and happy using the ADM device, mainly because he can use it with every day footwear, (his New Balance trainers) which he really likes - he loves everything relating to sports. The ADM is also really easy to use and he can now play football (his favourite)

and other sports with much greater confidence and less effort. He doesn't tire out so quickly and can play for longer with his friends. He hasn't once complained of any pain! JCDS is always willing to use the ADM, never "makes a scene" when asked to put it on and has taken to it very naturally. In our eyes, he is very happy with the ADM and so are we to see how much he has improved. JCDS is very pleased to know he is one of the first to use the ADM for conditions other than clubfoot and knows that his feedback may help others with conditions similar to his".

Conclusions

It is the therapist's opinion, as well as the parents, that the patient walks more naturally with the ADM. There is more abduction of the right foot and the foot is more visible in the stance phase. The patient has improved heel strikes, with more knee flexion in his walk.

In the parent's opinion, his major improvements are linked to his better balance and better gait pattern, which have improved with the use of the Ambulatory ADM. His confidence has improved as he feels he is increasing his own activities, with less physical effort and he feels he can overcome more physical challenges independently. His progress will continue to be monitored over the coming months.

About the ADM

The ADM was launched in March 2014 and is a wholly new type of Ankle Foot Orthosis that includes two sprung-loaded mechanisms aligned to the sub-talar and tibio-talar joints. The ADM was originally developed as night-brace to abduct and dorsiflex the feet of clubfoot patients. When attached to daytime shoes the ADM can improve the gait, mobility and balance of those suffering from a range of conditions.

The ADM is developed and manufactured in by C-Pro Direct Ltd in the UK. C-Pro Direct welcomes enquiries from practitioners treating children with condition similar to those of JCDS.

The ADM is Patented in many jurisdictions worldwide. For Europe EP Patent No EP2637612 and Registered Community Design No 002238881-0001 apply.