SDR Pathway

March 2022

Selective dorsal rhizotomy (SDR) surgery may benefit some children with cerebral palsy.

SDR may benefit

- ✓ Bilateral cerebral palsy – GMFCS II and III (spastic diplegia)
- ✓ Aged 4-10 years
- ✓ Spasticity significantly impacting on function
- ✓ MRI shows specific changes in certain areas of the brain (periventricular leukomalacia)
- ✓ Stable hips (<30% migration)
- ✓ Ability to participate with rehabilitation

SDR will not benefit

- ○ Where the MRI shows involvement of parts of the brain that helps with motor control (basal ganglia)
- ○ Where there is a movement disorder where muscles contract involuntarily, causing repetitive or twisting movements (dystonia)
- ○ Where there is significant weakness

Initial SDR discussion

If you think SDR would help your child, please talk to the paediatrician and physiotherapist who know your child. They will consider all points above, along with others.
If they think your child is suitable for SDR, they will refer your child to the Central Remedial Clinic (CRC).

SDR-specific assessment

In the CRC, we will arrange special assessments for your child:

- A targeted SDR physiotherapy assessment. Your local physiotherapist who knows your child will complete this assessment, with guidance from a CRC physiotherapist
- A gait analysis and a functional physiotherapy assessment in the CRC

Appointment at CRC

After these assessments, we will invite you and your child to meet our team in CRC.
We will explain the results of the assessments and answer any questions you might have.
We will then agree with you a plan for your child.

Recommendation for SDR
Proceed with SDR planning

Alternative recommendation
This might include options that would be better for your child, such as

- Medication
- Long-term exercise and activity, with the support and advice of a physiotherapist
- Botulinum toxin injections into the spastic muscles
- Orthopaedic procedures.

References
Po-Jung Chen, B., et al. (2019). "Selective Dorsal Rhizotomy for the Treatment of Gait Dysfunction in Cerebral Palsy: A Critical Analysis Review." JBJS Rev
Wang, K. K., et al. (2018). "Selective dorsal rhizotomy in ambulant children with cerebral palsy." J Child Orthop: 1-15.