Cerebral palsy: a multidisciplinary, integrated approach is essential

Cerebral palsy, a syndrome of motor impairment resulting from a lesion in the developing brain, has a worldwide prevalence of 1·0–3·5 per 1000 livebirths.[1,2] A life-course perspective needs to be adopted as more children live into their adolescence and adulthood. Individuals' participation in life and availability of family-centred services are very important and differ between countries.[3] In low-income countries, most treatments are provided by families and multidisciplinary assessment is done in rural clinics.[4]

We advocate for a multidisciplinary, integrative approach to rehabilitation, to be initially provided in child rehabilitation centres, as an effective way to manage this disorder. A Republican Children's Rehabilitation Centre was opened in Astana, Kazakhstan, in 2007. It admits more than 4200 children annually, of whom around 2400 have cerebral palsy. The multidisciplinary approach includes medical rehabilitation, assessment by psychologists, interventions for intellectual disability and learning difficulties, individualised education plans, occupational therapy, and social adaptation. Methods used in medical rehabilitation include kinesiotherapy; hydrokinesiotherapy; robot-assisted walking; botulin; physiotherapy; behavioural, social, play, and music therapy; occupational therapy; Perfetti method (cognitive sensory-motor therapy); neuropsychological diagnosis and rehabilitation; biofeedback speech therapy; special and inclusive education; and Montessori therapy. Social adaptation includes adaptive physical education and sports, training in a specially prepared autodrome, orthotics, and professional orientation.

The duration of a rehabilitation cycle is 25 days, to allow for as many children (coming from the whole country) as possible to be treated. One parent is allowed to stay with the child for the entire duration of the cycle and is instrumental in assuring continuity of treatment at home.

Outcomes are assessed using accepted standards and scales (International Classification of Functioning, Disability, and Health, functional independence measure, gross motor-function measure, Manual Ability Classification System, Barthel index of activity and daily living, and Ashworth scale), and an improvement is observed from a physical, psychological, and social viewpoint in most children. Follow-up is important; children's conditions are assessed through regular telephone conversations between their parents and the doctors. Families are also assisted by physicians in their home regions and during follow-up visits at the rehabilitation centre.

We think that a multidisciplinary, integrative approach to rehabilitation, started in well equipped and staffed centres, can improve appropriate diagnosis and treatment of children with cerebral palsy and ensure improved long-term results. Efforts should be made in middle-income (and, whenever possible, in low-income) countries to fund (perhaps through public–private partnerships), open, and sustain such centres.

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