

Ambulatory Prognosis in Cerebral Palsy: evaluation criteria and consequences for intervention

Michelle Bottos MD
Lucia Sciuto, PT

The ambulatory prognosis of children with cerebral palsy (CP) can be defined in the first years of life. Several studies (Badell – Ribera 1985, Campos da Paz et al. 1994, Bottos et al. 1995) suggest that the loco motor patterns achieved in the first month/years of life, for instance crawling, and the age at which these are achieved, are crucial for the development or non – development of independent walking and play a very important role in establishing prognosis.

The age of 3 years seems a turning point: those who have yet to achieve motor patterns such as crawling or bunny – hopping or shuffling, which require adequate trunk control, by that age have very little chance of developing a functional independent walking pattern, at least in the case of spastic syndromes (Bottos et al. 1995).

Furthermore, the data from several studies on adults with CP (Pimm 1992, Murphy et al. 1995, Bottos et al. 2001) show that the maintenance of independent walking is statistically associated with the age at which independent walking was achieved. It is suggested that, by the age of 3 years, a clear enough functional prognosis can be made and children could be subdivided into three groups. First, those who, by the age of 3, have yet to achieve locomotion patterns which require good – enough trunk control, will need the early supply of adequate assistive devices to enable them to develop ‘assisted’ motor independence, generally a powered wheel – chair (Butler 1986, 1997; Bottos et al. 1997, 1999, 2001). Physiotherapy alone, no matter how early it is started and which technique has been used, rarely can achieve a sustainable; independent walking (Bottos et al. 1995).

Second, for those children who, by the age of 3, have achieved the crucial motor milestones mentioned earlier, but who have yet to develop independent walking, intensive and prolonged physiotherapy is indicated along with the use of appropriate orthoses and possibly eventual orthopedic surgery, in order to achieve independent walking if possible. Third, those who, by the age of 3 years, have already achieved independent walking, need to be closely followed and to have periodic sessions of physiotherapy aimed at monitoring musculo-skeletal evolution over the years and to prevent the development of deformities where possible to maintain independent walking for as long as possible. These results raise several questions about the traditional physiotherapeutic approach to CP.