

Cerebral Palsy in rural South Africa and Lesotho: Clinical subtypes and gross motor function



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BACKGROUND

Limited but emerging data from sub-Saharan Africa suggests that the clinical spectrum of Cerebral Palsy (CP) may be different to that found in high-income countries. Until more data on the clinical picture of CP in low-income settings is available, it is difficult to postulate on the reasons for observed differences. Malamulele Onward is a non-profit organisation that exists to enable each child with Cerebral Palsy living in remote rural areas to reach their best potential within a supportive environment. We are an organisation providing specialised therapy (physiotherapy, occupational therapy and speech therapy) and training to therapists, as well as carer-to-carer training to underserved rural areas of South Africa and Lesotho where children severely disabled by Cerebral Palsy (CP) have little or no access to rehabilitation therapy and equipment. As a result we have built a baseline of data from all the children we have met over the years since the birth of our organisation in 2006.



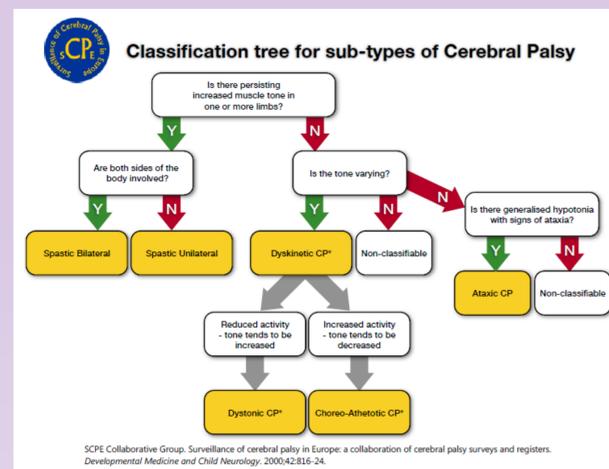
AIM

To describe and analyse the clinical sub-type and gross motor function in children with CP in rural South Africa and Lesotho, using existing data gathered by Malamulele Onward at various sites in rural South Africa and Lesotho



METHOD

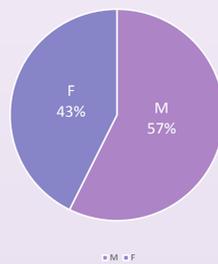
A retrospective clinical record review of children seen over the past nine years by a non-profit organization working with children with CP in rural, community based settings. Data regarding age, sex, clinical subtypes (based on the Surveillance of Cerebral Palsy in Europe classification system), and Gross Motor Function Classification (GMFCS) level were extracted and grouped and was taken from the following geographical regions - Eastern Cape, Limpopo, KwaZulu-Natal (KZN) and Lesotho.



RESULTS

Of the 972 records reviewed, 491 were excluded, either due to incomplete data or an unconfirmed diagnosis of CP. Of the 481 participants included in the analysis, 57% were male and ages ranged from 6 months to 34 years.

Gender Statistics of children with cerebral palsy in populations of South Africa and Lesotho (n=481)



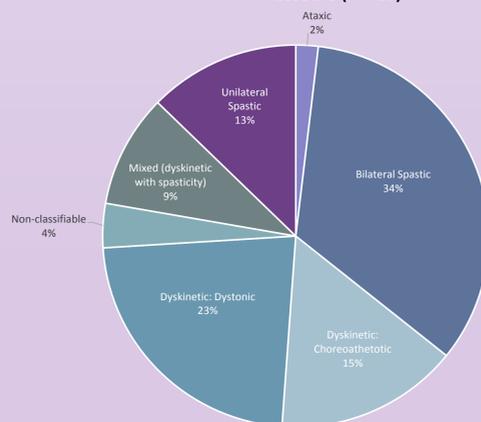
Age Demographics for Children with Cerebral Palsy included in this study (n=481)



RESULTS

481 participants were included in the study. The dyskinetic CP group was the commonest clinical subtype (n=184, 38%). This sub-type was divided further into dyskinetic: dystonic (n=110, 23%) and dyskinetic: choreo-athetotic (n=74, 15%). The next largest group was the bilateral spastic CP group (n=163, 34%), followed by unilateral spastic CP (n=61, 13%), the "mixed" group where children present with both spasticity and dyskinesia (n=46, 9%), followed then by a non-classifiable group of children either presenting with hypotonic CP or presenting with neurological signs that cannot be clearly categorised, i.e. young babies (n=18, 9%), and finally, ataxia (n=9, 2%).

CP Classifications of populations of children with CP in South Africa and Lesotho (n=481)



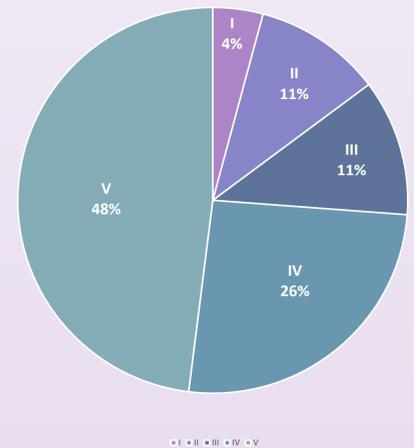
Ataxic Bilateral Spastic Dyskinetic: Choreoathetotic Dyskinetic: Dystonic Non-classifiable Mixed (dyskinetic with spasticity) Unilateral Spastic



RESULTS

Almost three quarters (74%, n=355) of children were either GMFCS Level 4 or 5 whilst 11% were Level 3; 11% Level 2 and 4% Level 1.

GMFCS Levels of populations of children with CP in South Africa and Lesotho (n=481)



CONCLUSIONS

This study confirms that the clinical spectrum of CP in sub-Saharan Africa is different from that reported in high income countries. There is a greater proportion of children with dyskinesia and children are more severely disabled. The high proportion of dyskinetic children (38% in our study vs 5,9% reported in the Australian Cerebral Palsy Register Report of 2013) shows significant variation from a first world population. This therefore warrants further investigation.

