



International Journal of Homoeopathic Sciences

E-ISSN: 2616-4493

P-ISSN: 2616-4485

www.homoeopathicjournal.com

IJHS 2022; 6(4): 21-27

Received: 13-07-2022

Accepted: 19-08-2022

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A case of global developmental delay (GDD) responding positively to homoeopathic treatment

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DOI: <https://doi.org/10.33545/26164485.2022.v6.i4a.634>

Abstract

Global developmental delay (GDD) is a delay in two or more developmental domains of gross/fine motor, speech/language, cognition, social/personal and activities of daily living. Poverty, the root cause of the existence of slums or settlement colonies in urban areas has a great impact on almost all aspects of life of the urban poor, especially the all-round development of children. It is observed 2.5% prevalence of developmental delay in the less than 2 year olds of deprived urban settlements, and the risk factors are low birth weight, birth asphyxia, coupled with poor environment of home and lack of awareness of child care services. Management of GDD involves sophisticated and expensive diagnostic and therapeutic measures which is again unaffordable by this class of patients. Here is a case report of a child 2 years 7 months old with GDD born in a urban poor colony, due to lack of awareness of child care services was deprived from treatment. Clinically the child was assessed for all the areas of developmental delay. After analyzing and individualizing the case a totality was framed on the intra uterine life events, observatory symptoms, observed by the physician and the child's mother. *Sanicula* 1M covered the totality which was prescribed in infrequent doses, also silica 6x was given. The follow up assessments were done using Gross motor function measures (GMFM) and WHO recommended growth chart. The Gross Motor Function Measure (GMFM) scale has been one of the most chosen to quantify the evolution of patients after the intervention, because it allows evaluating children with CP from 5 months to 16 years. It is a numerical rating scale, in which a higher score implies better gross motor function. WHO growth chart (0-5) years is applied for the assessment of height, weight, head circumstances (cms) assessed in 4 subsequent follow ups, a linear catch up growth observed with homoeopathic medicine.

During the period of treatment from 9th July 2018 to January 2019 the child showed marked improvement in gross motor/fine motor functions, cognition, social and daily activities. The child is still under treatment.

Keywords: Global developmental delay, gross motor function measure (GMFM), *Sanicula*, homoeopathy

Introduction

Around 17% of children referred to a community, pediatric clinic, will be because of a developmental concern and is acknowledged as affecting 1–3% of children⁶. Global developmental delay means significant delay in two or more areas of developmental performance in gross/fine motor, speech/language, Cognition, social/personal, and activities of daily living. On developmental examination, however, we tend to separate gross motor and fine Motor developmental domains since delay in one of these does Not necessarily mean difficulties in the other (e.g. some neuromuscular disease). In practice we use the term GDD when the child has a motor delay and delays in at least two other areas of developmental performance^[1]. There are several causes for GDD but many a times they remain undiagnosed. The etiology of GDD may be broadly classifiable as prenatal, perinatal and postnatal. The common causes include genetic syndromes or chromosomal anomalies, hypoxic-ischemic encephalopathy (HIE), neonatal encephalopathy (NE), cerebral dysgenesis, early severe psychosocial deprivation, antenatal toxin exposure, and central nervous system (CNS) infections^[7].

Case report

A patient aged 2 years 7 months Indian, Hindu girl was brought by her mother to Bhagwaan Buddha Homoeopathic medical college and hospital, Mallathalli Bangalore on 9July 2018 with complaints of developmental delay, noticed at 3rd month as the child was unable to hold the neck.

Table 1: Details of follow up

Date	Observation	Medicine/doses/repetition/advice	Justification
19-7-2018	<ul style="list-style-type: none"> ▪ No change in mile stones ▪ Complaints of difficulty to pass stool since 2days. ▪ Cries before passing stools. ▪ Child looks irritable. ▪ Does not follow instructions. ▪ Height:70 centimeters ▪ Weight:7.8kg ▪ Head circumference: 43centimeters 	Placebo/TID /5Days/advised plenty of fluids	Child has history of recurrent constipation, which has recurred after giving sanicula. So no repetition, no change of remedy.
26-7-2018	<ul style="list-style-type: none"> ▪ Bowels soft/clear, Responds to the commands /name. ▪ Child not irritable. Cooperating for examinations. ▪ Salivation decreased 	Placebo/OD/1 Month Advised simple exercises like extension flexion Message with oil. Mother advised to talk to child often using right words, calling her name repeatedly.	Generals good, Mind –calm, cooperative Slight improvement in particulars. No new complaints So no repetition, no change of remedy.
13-8-2018	<ul style="list-style-type: none"> ▪ c/o pain in the right ear since last night. ▪ a/f exposure to cold wind. ▪ Sleeplessness, restlessness, irritability, crying. ▪ Child does not allow us to touch. ▪ o/e thick discharge in right ear. ▪ Diagnosis: Acute otitis media 	Sanicula 1M/tid/1 day Placebo/tid/5days. Cleared the ear discharges. Covered with cotton plugs.	Due to change in climate child developed acute infection. Aacute totality covered Sanicula.
30-8-2018	<ul style="list-style-type: none"> ▪ c/o ear pain better after 2days ▪ Able to sit with support on parents lap. ▪ Child demands for food. Tries to hold food and eat herself but with spilling. ▪ Able to reach to objects. ▪ Trying to reach objects and crawling ▪ Responds to strangers. ▪ Smiles back ▪ Sleep good ▪ No new complaints ▪ Height: 74centimeters ▪ Weight: 8 kg ▪ Head circumference: 43cm ▪ GMFM Total Score: 	Placebo/ OD/ 20 Days Follow up after 1 Month	Generals good Particulars improving No new complaints
27-9-2018	<ul style="list-style-type: none"> ▪ Rolls in bed ▪ Crawls forward over abdomen ▪ Hand regard – improved ▪ Speaks Monosyllabus words like appa, amma ▪ Gets up and sits voluntarily ▪ Responds and Plays with her siblings 	Placebo/ OD/ 20 Days	good improvement in gross motor development, speech and social behavior no new complaints
9-11-2018	<ul style="list-style-type: none"> ▪ Sits with support for 6hrs ▪ Plays with objects enjoys plays ball with her brother ▪ Wants to go out and play ▪ Crawls till door ▪ Demand objects by pointing towards them ▪ Height:75 cm ▪ Weight: 8.5kg ▪ Head circumference: 43 cm 	Placebo/ OD/ 20 Days	Good improvement in generals and particulars and mind, no new symptoms
2-1-2019	<ul style="list-style-type: none"> ▪ Complaints of fever, coryza, watery nasal discharge since 1 day ▪ Sleeplessness crying whole night, restlessness, ▪ Refusing food, irritability, ▪ o/e temp 101f, ▪ weight: 8kg ▪ nasal mucus membrane inflamed ▪ chest auscultation clear ▪ Diagnosis: Acute upper respiratory infection 	Chamomilla1M/Tid/2Days Alfa alfa 200 / 20 days Steam inhalation	Acute totality covered Chamomilla Child not putting on weight with repeated infections hence Alfa Alfa200 given
27-1-2019	<ul style="list-style-type: none"> ▪ Activity –good ▪ Crawls till the door and round the house ▪ Sits with support crawls with rolling up and sits voluntarily by herself ▪ Trying to stand with enjoy playing with other kids support ▪ For 2-3 min ▪ with Support of examiners hands tries to put 2-3 steps ▪ Sits and 	Placebo/OD/1Month	Silicea 6x OD /10 Days

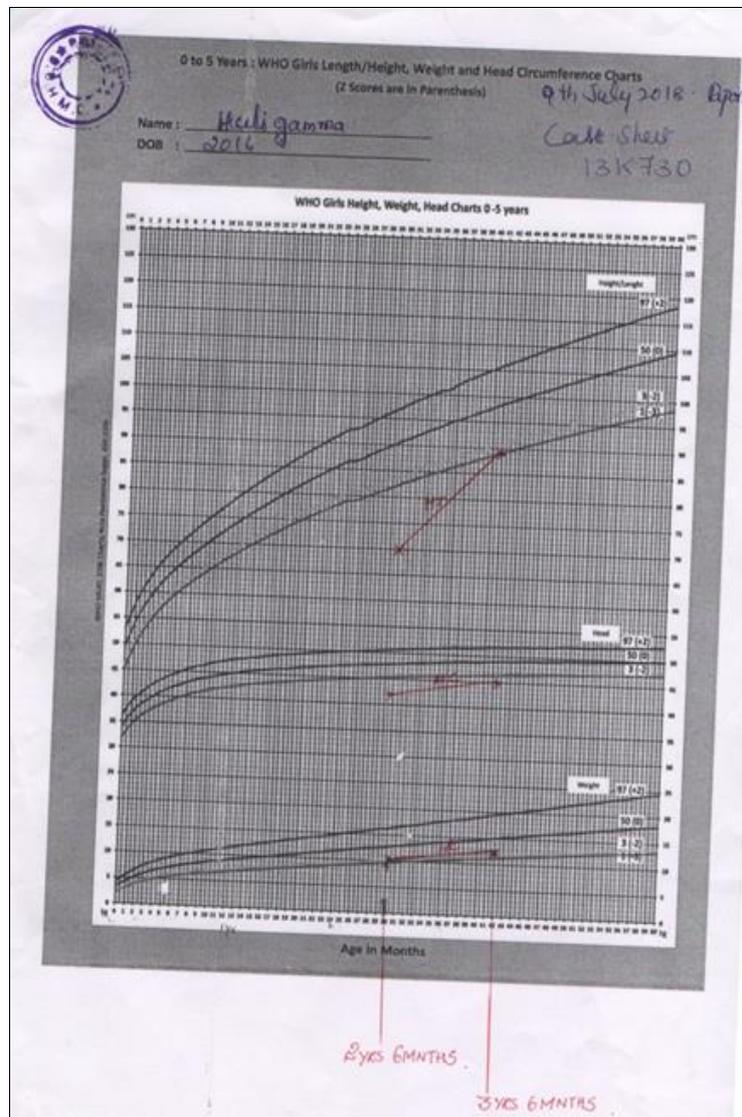
<ul style="list-style-type: none"> ▪ Keeps her crossed legs, but occasionally sleeps straight in bed ▪ Eats well ▪ Height:85 centimeters ▪ Weight: 10 kilograms ▪ Head circumference: 43 cm ▪ GMFM Total score scale: 36% 		
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Table 2: Gross Motor Function Measures (GMFM)

Sl No	Date	GMFM total score
1.	09-07-2018	2.23%
2.	30-08-2018	19.4%
3.	27-01-2019	36%

Table 3: Fine Motor Development

Age	Milestone{fine motor developmental}	2 ½ Year (09-07-2018) yes/no	3 years (27-01-2019) yes/no
4 months	Bidextrous reach (Reaching out for objects with both hands)	no	Yes
6 months	Unidextrous Reach (Reaching out for objects with one hand); transfers objects	no	Yes
9 months	immature pincer grasp; probes with forefinger	no	yes
12 months	pincer grasp mature	no	yes
15 months	imitates scribbling; tower of 2 blocks	no	No
18 months	scribbles; tower of 3 blocks	no	No
2 years	tower of 6 blocks,; vertical and circular stroke	no	No
3 years	tower of 9 blocks; copies circle	no	No
5years	copies cross; bridge with blocks	no	No



Graph 1: WHO recommended growth chart

Discussion

Management of Global developmental delay is very expensive especially for those patients coming from low socioeconomic status. Homoeopathic medicines combined with physiotherapy, speech therapy, good nutrition and family support can provide the child with GDD an ability to become independent of his daily activities. Further referring the child and the parent to support groups and organizations which assist GDD children, can help the child to become independent.

Homoeopathic management of such pediatric chronic cases involves proper case taking. Intrauterine life events are very important as it forms the seed of the child’s evolution to its present disease. According to Herbert A. Robert’s, disturbance of vital energy results in a disturbance of the whole human economy. Such a disturbance may come from prenatal influences, such as effects of sudden fright or excessive worrying by one or both parent at the time of conception and during gestation, it may be due to hereditary stigma of one or both parent cell, which may be perhaps due to hereditary disease or miasm [8].

As a keen and unprejudiced observer it is important to take a note of all the changes in health of the body and mind, perceived externally by means of the senses, which are felt by the patient himself, remarked by those around him, and observed by the physician [9] Like in any pediatric cases mother’s observation about the child has to be taken note of. In the above case our prescribing totality included intrauterine life event, observed symptoms by the physician and mother. *Sanicula* was the remedy we arrived at. *Sanicula* Aqua, is indicated to a child whose mother suffered from lack of support and care during pregnancy [10]. A child who cries, kicks, irritable, does not want to be touched, looks old, greasy, brownish, wrinkled and rickety

[11].

The child has been with us for past 6months. Mother was educated regarding her child’s condition, and encouraged to get her child for the follow ups regularly. The child showed much improvement in the development of few of the mile stones and the growth (refer growth chart). Gross Motor Function Measure (GMFM) scale total score which was 2.23% on July 2018 improved to 36% on January 2019 (refer table no 1). There were many changes in her facial expressions, social behavior as she is very comfortable now playing with her younger brother, she is very affectionate towards him, and she wants to play with him. She likes to play with a ball. She makes gestures to demand for food and water. She is able to crawl toward the objects she desires for. She is able to sit without support for long time on the ground on the chair and play for long time. She makes attempts to stand with support.

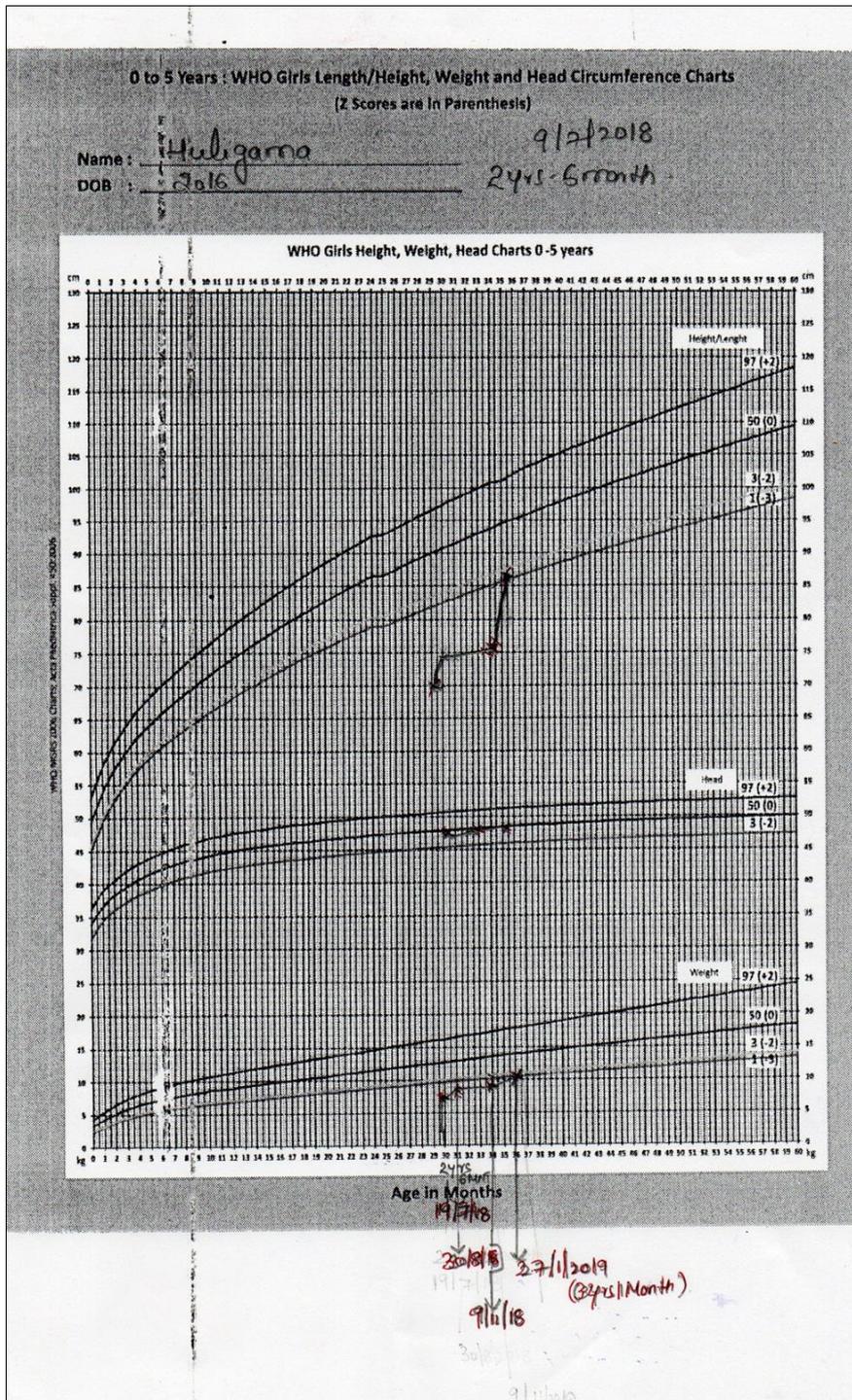
The child often showed up with constipation which was again managed with *Sanicula*. There were one or two episodes of respiratory infections and gastrointestinal infections which were managed with acute remedies like chamomilla and Colocynth is based on the acute totality, details are given in the follow up tables.

This is an observatory case study which helps us to understand the homoeopathic management of global development delay. It also helps us to understand the importance of intrauterine life history, utility of observatory symptoms in arriving at the similimum. It also helps us to understand the importance of infrequent repetitions and acute prescribing based on acute totality. We have educated the mother regarding the government facilities for support to children with GDD. Shortly we will refer the child to special disability center of assisted management.

DATE OF VISIT: 09/07/2018		GMFM-88 SUMMARY SCORE		GOAL AREA
DIMENSION	CALCULATION OF DIMENSION % SCORES			(Indicated with ✓ check)
A. Lying & Rolling	Total Dimension A = $\frac{4}{51} \times 100 = 7.84\%$			A. <input type="checkbox"/>
B. Sitting	Total Dimension B = $\frac{2}{60} \times 100 = 3.33\%$			B. <input type="checkbox"/>
C. Crawling & Kneeling	Total Dimension C = $\frac{0}{42} \times 100 = 0\%$			C. <input type="checkbox"/>
D. Standing	Total Dimension D = $\frac{0}{39} \times 100 = 0\%$			D. <input type="checkbox"/>
E. Walking, Running & Jumping	Total Dimension E = $\frac{0}{72} \times 100 = 0\%$			E. <input type="checkbox"/>
TOTAL SCORE = $\frac{\%A + \%B + \%C + \%D + \%E}{\text{Total \# of Dimensions}}$				
		= $\frac{7.84 + 3.33 + 0 + 0 + 0}{5} = \frac{11.17}{5} = 2.23\%$		
DATE OF VISIT: 30/08/2018.				
DIMENSION	CALCULATION OF DIMENSION % SCORES			GOAL AREA
F. Lying & Rolling	Total Dimension A = $\frac{30}{51} \times 100 = 58.8\%$			A. <input type="checkbox"/>
G. Sitting	Total Dimension B = $\frac{13}{60} \times 100 = 21.6\%$			B. <input type="checkbox"/>
H. Crawling & Kneeling	Total Dimension C = $\frac{7}{42} \times 100 = 16.6\%$			C. <input type="checkbox"/>
I. Standing	Total Dimension D = $\frac{0}{39} \times 100 = 0\%$			D. <input type="checkbox"/>
J. Walking, Running & Jumping	Total Dimension E = $\frac{0}{72} \times 100 = 0\%$			E. <input type="checkbox"/>
TOTAL SCORE = $\frac{\%A + \%B + \%C + \%D + \%E}{\text{Total \# of Dimensions}}$				
		= $\frac{58.8 + 21.6 + 16.6 + 0 + 0}{5} = \frac{97}{5} = 19.4\%$		

DATE OF VISIT: 27/10/2019 GMFM-88 SUMMARY SCORE

DIMENSION	CALCULATION OF DIMENSION % SCORES		GOAL AREA <small>(indicated with ✓ check)</small>
A. Lying & Rolling	Total Dimension A 51	= $\frac{51}{51} \times 100 = 100$ %	A. <input type="checkbox"/>
B. Sitting	Total Dimension B 60	= $\frac{31}{60} \times 100 = 51.6$ %	B. <input type="checkbox"/>
C. Crawling & Kneeling	Total Dimension C 42	= $\frac{11}{42} \times 100 = 26$ %	C. <input type="checkbox"/>
D. Standing	Total Dimension D 39	= $\frac{1}{39} \times 100 = 2.56$ %	D. <input type="checkbox"/>
E. Walking, Running & Jumping	Total Dimension E 72	= $\frac{0}{72} \times 100 = 0$ %	E. <input type="checkbox"/>
TOTAL SCORE = $\frac{\%A + \%B + \%C + \%D + \%E}{\text{Total \# of Dimensions}}$			
= $\frac{100 + 51.6 + 26 + 2.56 + 0}{5} = \frac{180.16}{5} = 36$ %			



Conclusion

The above case report helped us to understand the utility of various assessment scales of motor development. It also helped us to assess the positive role of individualised homoeopathic similimum in the management of global developmental delay. Further studies should be taken to evaluate the role of homoeopathy in GDD.

Conflict of Interest

Not available

Financial Support

Not available

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How to Cite This Article

Gokak SC, Korawar S. A case of global developmental delay (GDD) responding positively to homoeopathic treatment. *International Journal of Homoeopathic Sciences*. 2022;6(4):21-27. DOI: <https://doi.org/10.33545/26164485.2022.v6.i4a.634>

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