

## ROLE OF AYURVEDA IN DOWN SYNDROME

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### ABSTRACT

Down syndrome is a genetic disorder caused when abnormal cell division results in extra genetic material from chromosome 21. This extra genetic causes developmental changes and physical features of Down syndrome. It is usually associated with physical features of Down syndrome. It is usually associated with physical growth delays, mild to moderate Intellectual disability and characteristic facial features. Approximately 1 in 800 to 1000 children are born with Down syndrome. Its occurrence is affected by age of mother and other different factors.<sup>[1]</sup> According to Ayurveda, Down syndrome can be occurs due to *Vata dosha* and *Beeja dosha* abnormality. This case study deals with Ayurvedic management of Down syndrome with *Shirodhara*, *Abhyanga*, *Matra basti*, *Utsadana*. Patient showed

impressive improvement in presenting symptoms. **Aim-** To study role of ayurveda in down syndrome. **Material and Method-** A child 1 year 8 months old with symptoms of drooling of saliva, delayed milestones, delayed speech brought by their parents in opd. Medhya drugs

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orally with panchkarma procedures like shirodhara, matra basti, sarvang abhyanga given.

**Observations And Results-** Appetite of child got improved. The activity of child gets mildly increase. Without sitting with support achieved, Supportive standing and walking, Supportive crawling, Can speak bisyllabus words. **Conclusion:** Case study reveals *Ayurvedic* treatment has positive effects on child improvement.

**KEYWORDS:** Down syndrome, *Abhyanga, Matra Basti, Shirodhara.*

## INTRODUCTION

Down syndrome is one of the most prevalent genetic disease. It is among leading causes of Intellectual disability.<sup>[2]</sup>

Incidence increases with Increasing maternal age.

Age of mother	Risk factor
20 years	1:2000
30 years	2:1000
40 years	3:100

The Chromosomal abnormalities associated with Down syndrome manifest in variety of physical and mental symptoms such as flat appearing face, upward slanting of eyes, short neck, deep crease across centre of palm (simian crease), Short stature.<sup>[3]</sup> Children with Down syndrome develop more slowly than normal. They experience delay in speech, mild to moderate mental retardation having varies health issues including heart defects, GIT anomalies, weak neuromuscular tone, dysmorphic features of head, neck, airways, visual, audiovascular anomalies. Its condition can be suspected at the time of birth when baby displays dysmorphic physical features confirmed diagnosis made with the help of investigation like karyotype, maternal serum markers (triple test), short femur, CHD, Clinodactyly, Thick nuchal fold. In *Ayurveda*, It can be understood as *Sahaja beeja- beeja bhaga, beeja-bhaga avayva janya vikara*(Disorder of germ cell, chromosome).<sup>[4]</sup>

## CASE REPORT

### Basic information of patient

Name-XYZ	
Age- 1 year 8 months	OPD No.-1808300121
Sex- Female	IPD No.-1808310006
Informant- Mother	Address- Nachangaon

**Chief Complaint-** Drooling of saliva since age of 6 months, delayed speech since age of 7-8 months, Unable to sit, stand and walk without support since 1 year.

Associated complaints- Cough and cold since 3 days, Lack of appetite since 7-8 months (on and off), Irregular bowel since age of 1 year.

**Present History-** Patient came to OPD with complaint of drooling of saliva, delayed speech and unable to sit and stand without support, unable to walk without supporting even after completing 1.8 years of age. Mother noticed that child has not recognized parents as well as other milestones are delay, not able to speak, crawls, walk, sit at the 16 months of age.

**Past History-**Not significant.

### Birth History

- Antenatal- Mother was having history of stress in work, place and no history other medical illness.
- Natal history- Full term vaginal delivery with birth weight 2.7 kg, cried soon after birth.
- Post natal- Child had given NICU care just after delivery for hyperbilirubinemia and observation due to syndromic features.

**Immunization History-** All vaccines according to schedule till age.

**Family history-** Nothing significant

### Personal history

<b>Appetite</b>	<b>Average</b>
Bowel	Irregular with hard stool
Urine	normal, 10-12 /day
Sleep-	Disturbed,
Habits	History of teeth grinding

### General Examination

<b>Built-</b>	<b>Lean</b>
Appearance	Lethargic
Eyes	Pallor+,
Tongue	Coated with protuberance
P/R	110/min
R.R	24/min
B.p	90/50 mm of hg
Temp	Normal

**Systemic Examination**

Cns	Conscious, but not oriented about time and place.
Reflexes	Plantar –flexion, knee jerk – sluggish, ankle jerk- sluggish, biceps and triceps-
Muscle power	Grade 4/5, b/l ul and ll
Muscle tone	Hypotonic,
Cvs	N
R.s	N
P/a	Soft, no distension or organomegaly

**Anthropometry**

Wt	7 kg,
Ht	62 cm,
Head circumference-	42 cm
Mid arm circumference	14 cm
chest circumference-	41cm

**Developmental History**

S. NO	Parameters	Milestones	Attained age	Normal limit
1.	<b>GROSS MOTOR</b>	Neck holding	7 months	7 months
		Sitting with support	20 months	5 months
		Sitting without support	22 months	9 months
		Stand without support	24 months	12 months
		Walk without support	28 months	13 months
2	<b>FINE MOTOR</b>	Pincer grasp	18 months	8 months
3	<b>LANGUAGE</b>	Cooing	delayed	3 months
		Monosyllabus (ma,ba)	10 months	6 months
4	<b>PERSONAL-SOCIAL</b>	Eye contact	7 months	7 months
		Recognised mother	6 months	3 months
		Social smile & Recognizing relatives	Delayed	3 months

**Treatment Protocol**

*Deepan, Pachana, Snehapana, Abhyanga, Swedana, Basti*

Date of admission 31/8/18, Treatment is given for total 5 sittings each of 7 days It includes *panchkarma* procedures and shaman *aoushadhis*.

**Panchkarma Procedures-Ist Sitting**

S. No	Therapy	Medicine used
1	Shirodhara followed by shiroabhyanga	Brahmi tail
2	Utsadan	Dashmool tail +Triphala churna for 3 days
3	Sarvang abhyanga	Dashmool oil (after 3 days)
4	Nadi swedana	With Dashmool Kshaya for 3 days

5	Pinda sweda	Shashtishali panda sweda
6	Matra basti	Dashmool oil 1st day -10 ml, 2 <sup>nd</sup> day-15 ml, 3 <sup>rd</sup> day-20 ml, 4 <sup>th</sup> day- 25 ml
<b>Second sitting</b>		
1	Shirodhara followed by shiroabhyanga	Brahmi tail
2	Sarvang abhyanga	Dashmool oil (after 3 days)
3	Pinda sweda	Shashtishali panda sweda
4	Matra basti	Dashmool oil 1st day -10 ml, 2 <sup>nd</sup> day-15 ml, 3 <sup>rd</sup> day-20 ml, 4 <sup>th</sup> day- 25 ml, 5 <sup>TH</sup> DAY 30 ml, 30 ml for next 2 days
<b>Third Sitting</b>		
1	Shiropichu	Brahmi tail
2	Sarvang abhyanga	Dashmool oil (after 3 days)
3	Pinda sweda	Shashtishali panda sweda
4	Matra basti	Ksheerbala oil 1st day -10 ml, 2 <sup>nd</sup> day-15 ml, 3 <sup>rd</sup> day-20 ml, 4 <sup>th</sup> day- 25 ml, 5 <sup>TH</sup> DAY 30 ml, 30 ml for next 2 days
<b>Fourth Sitting</b>		
1	Shirodhara	Brahmi tail
2	Sarvang abhyanga	Dashmool oil (after 3 days)
3	Pinda sweda	Shashtishali panda sweda
4	Matra basti	Dashmool oil 1st day -10 ml, 2 <sup>nd</sup> day-15 ml, 3 <sup>rd</sup> day-20 ml, 4 <sup>th</sup> day- 25 ml, 5 <sup>TH</sup> DAY 30 ml, 30 ml for next 2 days
3	Nasya	Brahmi oil
4	Utsadan	Triphala churna+Dashmool tail (for 3 days)
<b>Fifth Sitting</b>		
1	Shirodhara	Brahmi tail
2	Sarvang abhyanga	Dashmool oil (after 3 days)
3	Pinda sweda	Shashtishali panda sweda
4	Matra basti	Dashmool oil 1st day -10 ml, 2 <sup>nd</sup> day-15 ml, 3 <sup>rd</sup> day-20 ml, 4 <sup>th</sup> day- 25 ml, 5 <sup>TH</sup> DAY 30 ml, 30 ml for next 2 days
5	Nasya	Brahmi oil

**Shaman Aoushad**

	churna+Vacha churna		
4	Brahmi Vati	1/2tab Bd after food	Water
<b>3<sup>rd</sup> Sitting</b>			
1	Neurocare drops	10 drop Bd(after food)	Milk
2	Ashwagandha churna	½ tab Bd(after food)	honey
3	Sitopladi churna+trikatu+Guduchi churna+Yashtimadhu churna+Vacha churna	¼ each 4 times a day	Honey
4	Saptamrit lough	1/3tab Bd after food	Water

5	Samvardhan ghrit	10 mlBd after food	Milk
<b>4<sup>th</sup> Sitting</b>			
1	Orofer XT drops	1 ml od(after food)	Water
2	Ashwagandha churna+Brahmi churna	½ tab Bd(after food)	Honey
3	Sitopladi churna+trikatu+Guduchi churna+Yashtimadhu churna+Vacha churna	¼ each 4 times a day	Honey
4	Saptamrit louh	1/3tab Bd after food	Water
5	Samvardhan ghrit	10 mlBd after food	Milk
5	Saptamrit loha	¼ tab Bd before food	Water
<b>5<sup>th</sup> Sitting</b>			
1	Cognium syruo	3ml tds(after food)	Water
2	Ashwagandha churna	½ tab Bd(after food)	Honey
3	Sitopladi churna+trikatu+Guduchi churna+Yashtimadhu churna+Vacha churna	¼ each 4 times a day	Honey
4	Samvardhan ghrit	10 mlBd after food	Milk
5	Krimikutha rasa	¼ tab Bd before food for 3days	Water

## RESULTS AND DISCUSSION

As per *Ayurvedic aspects*, Down syndrome can be understood as *beejabhagaavayava janya vikara by vata dushti*. Since *vata* vitiation is the primary cause of Down syndrome the treatment protocol should be strengthening and building to increase the *prana* (life energy) present. Hence *vatahara* and *medhya dravya* treatment and symptomatic treatment according to condition is followed. The oil therapy of *shirodhara* strengthens the mind, building *ojas* to contain the *prana* and *tejas*. The combination of *abhyanga*, *shirodhara*, and *swedhna* is known as bliss therapy.<sup>[6]</sup>

After the first sitting the appetite of child got improved. The activity of child gets mildly increase but mother also complaints for irregular bowel movements and easy distractibility.

After 2<sup>nd</sup> sitting Without sitting with support achieved- for 10min, Supportive standing and walking, Supportive crawling, Can speak bisyllabus words.

After completion of course child is able to sit without support, able to walk without, understand natural calls support (urine, stool urge),Run with walker, Improved gross, fine language, social milestone improved.

## CONCLUSION

As in today era ,late age marriage are preferred, so conceiving age is also going increasing, that leads to risk factor of down syndrome Case study reveals *Ayurvedic* treatment has positive effects on child improvement. Since root cause of disease can not be treated, but it can lead patient to better lives mentally and socially.

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