

SUCCESSFUL AYURVEDIC MANAGEMENT OF PROGRESSIVE CERVICAL  
DYSTONIA WITH SPASMODIC DYSPHONIA-A CASE STUDY

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## ABSTRACT

**Introduction:** Cervical dystonia is characterized by involuntary muscle contractions in the neck that cause abnormal movements and postures of the neck and head. Mostly it is idiopathic but genetic link is established apart from causes of auto-immunity and trauma. Muscle contractions are quite painful and that disturbs normal life and adversely affects quality of life. Oral treatment, Inj. Botulinum toxin, surgical procedures, physio-therapy and counselling is the most commonly followed line of treatment in Modern science. However no treatment is consistent with results in amelioration of symptoms and permanent cure of this disorder. However Ayurved has ability to treat this disorder permanently. **Case study:** This 27 year old male patient had trauma to his neck and shoulder due to fall of large cut Stem of tree from height. He developed Cervical retrocollis, followed by Spasmodic dysphonia. He took treatment including course of Inj Botulinum toxin from a famous corporate hospital in Pune (India) but did not get the relief. Finally he approached to the Ayurved. He was hospitalized in Sassoon General hospital in Pune and given Ayurvedic line of treatment. Patient became symptom free within 75 days of treatment. His voice was also restored to normal. There is no recurrence of the disorder for more than last 6 years. **Conclusion:** This case study is testimony of strength of Ayurved in treating such disorders like Cervical dystonia, where Modern Science has limitations.

**KEYWORDS:** Cervical dystonia, Focal dystonia, Cervical retrocollis, Spasmodic dysphonia, Aghataj Vata-prakop.

## INTRODUCTION

Dystonia may be defined as a disorder characterised by sustained (>100 ms) or excessive/ repetitive involuntary muscle contractions frequently associated with twisting and abnormal postures. Dystonia may be classified as by age of onset (Childhood or Adult), or as per Distribution (Focal, Multi-focal, Segmental or Generalized) or as per aetiology (Primary or Secondary).<sup>[1]</sup> Cervical dystonia is characterized by involuntary muscle contractions in the neck that cause abnormal movements and postures of the neck and head.<sup>[2]</sup> Cervical dystonia belongs to the group Focal dystonias, in which dystonic contractions of neck muscles occur resulting in to head deviating to one side, termed as Cervical torticollis, i.e. in forward direction known as Anterocollis and /or in a backward direction said to be Cervical Retrocollis. The exact cause is not known (Idiopathic), however genetic factors, auto-immunity and trauma may contribute to Cervical dystonia. Muscle contractions may be very painful and disturbs normal life and affects quality of life adversely.<sup>[3]</sup> In some individuals Spasmodic dysphonia

(Laryngeal dystonia) develop following Cervical dystonia. Laryngeal dystonia (LD) is a chronic voice disorder characterized by spasms of the muscles of the larynx. The spasms can result in tightness in the throat, recurrent hoarseness, and changes in voice quality and/or difficulty speaking. There are two types of Laryngeal dystonia, namely Adductor Spasmodic Dysphonia, the more common type, affects approximately 80% to 90% of individuals. This type affects the muscles that draw the vocal cords together. Adductor SD is characterized by a tight, strained, or harsh sounding voice. Abductor SD affects the muscles that draw the vocal cords apart. Abductor SD is characterized by breathy, whispered speech and loss of voice for short periods of time (aphonia).<sup>[4]</sup>

Steeves TD et al reported prevalence of Primary dystonia as 50/million population.<sup>[5]</sup> Elia mentioned the mean age at disease onset was 48.3 +/- 17.7 years; 13 patients carried the DYT1 CAG deletion. In 15.9% of cases there was a positive family history of dystonia. Cranial,

cervical or lower limb onset was more common amongst women (M:F ratios were 1:2.7, 1:1.9, and 1:3).<sup>[6]</sup>

Marian et al reported Dystonic movements typically worsen with anxiety, heightened emotions, and fatigue, decrease with relaxation, and disappear during sleep.<sup>[7]</sup> Generally the diagnosis of this disorder is made clinically. In patients with early-onset dystonia or childhood dystonia or late onset but with an affected relative with early-onset dystonia, DYT1 gene testing is required with appropriate genetic counselling.<sup>[6]</sup> In adults with focal or segmental dystonia only, no diagnostic tests are required because they usually are unrevealing.<sup>[7]</sup> Treatment options include counselling and education, one or a combination of Anticholinergics, Diphenhydramine, Baclophen, Benzodiazepines, and Dopaminergic agents; botulinum toxin injections, and several surgical procedures like Rhizotomy, Myotomy, Deep brain stimulation surgery, etc but none of them is really consistent in curing this disability and disorder.<sup>[8]</sup> For the majority of patients where disease-modifying therapies are not yet available, treatment is symptomatic.<sup>[9]</sup> Thus the options to treat Cervical dystonia are limited in Modern science.

Case study:- This 27 year old male farmer sustained injury to neck when a large cut Stem of tree fell on his neck and shoulders from 8 feet of height, in Sep 2013. Following the trauma he developed Cervical dystonia. He constantly remained in position of Retrocollis (neck a

He was admitted in Ayurved Research Department of Sassoon General Hospital, Pune on 17.11.2014. His detailed history was taken.

Patient C/o Pain in either side of neck,  
Posture of neck remaining extended posteriorly,  
Tightening of neck and muscles of back and shoulders,  
Difficulty in swallowing.  
Whispering voice

14 months

H/o Trauma by fall of large cut Stem of tree from 8 feet of height on his neck & shoulders.

No H/o Similar complaints in family, i.e. *Matrukul* (relations from mother side), *Pitrukul* (relations from Father side) and *Swakul* (Siblings).

His voice became whispering type that he correlated with an incident, when his sister in law was escorting a bull with the rope in hand in their farm; suddenly the bull became violent and dragged his sister- in- law for some distance. She was 7 months pregnant, he ran after the bull, wanted to shout for her rescue, then suddenly he noticed he could not shout. On the same time a cut stem of tree fell on his neck and shoulders. He developed Cervical dystonia and Laryngeal dystonia at the same time. His voice became whispering type, difficult to hear (hardly audible).

H/o Modern treatment received from one famous hospital in Pune for one year, but found no permanent

receding posteriorly) when in upright position. It used to disappear during sleep. All of his routine activities including eating food, he had to do in that awkward position. There was spasticity noticed in his muscles of back and shoulders. The disability was progressive, increased in severity, quite painful and that had ruined his quality of life. He approached to one famous corporate hospital in Pune and was admitted there from 9.10.2013 to 11.10.2013.

He was investigated; his M.R.I. cervical spine dated 10.10.2013 revealed, "Diffuse disc bulge with a small central protrusion at C6-7 level compressing the thecal sac with mild bilateral foraminal encroachment. Diffuse disc bulge at C5-6 level indenting the thecal sac". He was diagnosed as a case of **Progressive Cervical Dystonia with Spasmodic dysphonia**. He was treated with Tab Pacitane 2 mg TDS, Tab Rivotril (Conazepam) 0.5 mg HS., Tab Syndopa 110 mg TDS, Tab Felicita-OD, for relieving pain he was given Tab Ultracet ½ sos. He was discharged home and was administered course of costly Inj. Botox in to the neck muscles on OPD basis every 2 months. But there was neither improvement in his physical condition nor in his voice for more than one year. He was desperate of his physical condition. One of patients of author, known to him, referred the case to the author at Ayurvedic OPD of Sassoon General Hospital, the teaching hospital of the famous B.J. Medical College in Pune (India).

relief. A course of Inj Botulinum toxin was administered to which gave some relief temporarily but again the condition used to recur. There was difficulty in swallowing following the Inj Botulinum toxin. The high cost of the injection was also a constraint for him.

Personal history: Non smoker, teetotaller, Appetite reduced, Sleep disturbed. Bladder/ Bowel- Normal.  
O/E:- Afebrile, Pulse-80/min, B.P.130/80 mm Hg  
RS, CVS, P/A -Nothing abnormal detected.  
CNS- Conscious, higher functions -normal  
Cervical dystonia ++++ Rt. Upper limb dystonia+  
Muscles of back in spasm while walking, Cervical retrocollis ++++ Dysphonia ++ Voice feeble and whispering. Patient appeared mentally depressed.

**Treatment:-** Treatment is briefly outlined in the Table No.1.

**DISCUSSION**

We have to look Cervical dystonia as a Vata disorder occurred due to trauma on Marma sthanas i.e. Aghataj vata-prakop. Sushrutaacharya mentioned total 107 Marma sthanas (Vital points) divided in 5 categories namely Mans-marma, Sira-marma, Snayu-marma, Asthi-marma and Sandhi-marma.<sup>[10]</sup>

**Saptottaram marmashatam I Tani Marmani Panchatmakani bhavanti; tadyatha- Maunsmarmani, Siramarmani, Snayumarmani, Asthi marmani, Sandhimarmani cheti II** Su. Sharir sthanam 6/3

The present case got injured Snayu marma, Asthi marma and Sandhi marmas involving marmas of Cervical muscles, cervical vertebrae, ligaments and cervical inter-vertebral joints. Sushrutaacharya mentioned treatment of Snayu, Sandhi and Asthigat vata by Snehan (Oleation), Upanah (Poultice application, Agnikarma (Cautery), Bandhan (Bandaging) and Mardan (Massage).<sup>[11]</sup> Su. Chikitsa sthanam. 4/8.

Here it is to be taken in account the *Samprapti* of the present case which occurred following trauma. Sean O'Riordan, Michael Hutchison reported Cervical dystonia following peripheral trauma based on a case-control study.<sup>[12]</sup> In the present case, this trauma was preceded with *Bhaya* (fear) as mentioned earlier.

**Vishado rog vardhananam shreshsta.**<sup>[13]</sup> It is mentioned by Charakacharya that *Vishad* (Grief) and *Bhaya* (Fear) aggravates the illness. The incident of his dysphonia as narrated by patient may be analysed in Ayurved as *Bhayaj vata-prakop*. In *Vata-prakop*, treatment of *Snehan-Swedan* (Oleation and Steaming), *Abhyanga* (Anointment/ Massage), *Basti* (Enema) and *Sneha-Virechanam* (Oily purgatives) was advocated by Sushrutacharya in following Shloka<sup>[14]</sup>/(Verse):-

**Sneha-Swedastatha Abhyango Basti: Sneha-virechanam II**

Su Chikitsa sthanam 4/21

We resorted to correct the imbalance of 'Vat' by giving appropriate Ayurvedic line of treatment.

Patient was treated on the sound principles of Ayurved, i.e. *Deepan-Pachan*, *Vatanuloman chikitsa* and *Brihan/Rasayan* (*Apunarbhav*) *chikitsa* datewise shown in the Table no.1.

*Saddo-vaman* was executed for removing the *Sanchit doshas*, followed by 3 days of *Sansarjan kram*. *Deepan-Pachan-Virechan* was administered by *Sitopaladi*, *Avipattikar* and *Hingvashtak choorna*.

*Panchakarma*:- *Snehan*, *Swedan*, was executed as advised in this disorder by the classical texts, mentioned above. A course of *Yogbasti* i.e. *Niruh* and *Anuvasan/Matra basti* by *Sahchar tail*, followed by *Tiktakshir-basti* was administered. The contents of *Tiktakshir-basti* were *Ashwagandha* (*Withania somnifera*)+ *Shatavari*

(*Asparagus racemosus*) + *Bala* (*Sida cordifolia*)+ *Kaunch beej* (*Mucuna pruriens*)+ *Gokshur* (*Tribulus terrestris* + *Jyotishmati* (*Celastrus peniculatus*) + *Parsika yawani* (*Hyocymous niger*)+ *Guduchi* (*Tinospora cordifolia*) + *Deodar* (*Cedrus deodara*) . *Ashwagandha* is known for its *Balya* and *Rasayan* effect. *Bala* (*Sida cordifolia*) reduced inflammation of nerves and provided energy and strength to muscles and nerves. *Shatavari* is nutritive tonic, having *shoth-har*, *Rasayan* and *Balya* properties. *Kaunch beej* facilitated muscle action in orderly manner.<sup>[15]</sup> *Gokshur* reduced *Vata*. *Jyotishmati* acted as *nervine tonic*. *Musali* (*Hypoxis orchoides*) was proved to be *Vatanashak*, *Rasayan* and was muscle relaxant. *Parsika yawani* (*Hyocymous niger*) was used to treat his disturbed sleep and mental depression.

We administered *Guduchi* (*Tinospora cordifolia*) + *Musta* (*Cyperus rotundus*) + *Deodar* (*Cidrus deodara*) in *ghrita*, for being *Pittashamak* and *Rasayan* dravyas. *Ghrita* was the medium which increased potency of them.

*Pindsweda* was executed as per procedure mentioned in the classical texts and briefly mentioned in the treatment chart.

*Nasya*- followed by administering 2 drops of *Panchendriya vardhan tail* in each nostril. *Pradhaman nasya* was also performed by using *Vekhand*.

A course of *Kati-basti* by *Sahachar tail/ Narayan tail A/D* was administered for 2 weeks.

*Shirodhara*- *Shirodhara* -one of the *Panchkarma* procedures, was performed using *Ashwagandha* (*Withnia somnifera*), *Jatamansi* (*Nardostachys jatamansi*), *Dashmool siddha tail* in ascending and descending manner for 2 weeks (starting from 15 min and increasing the period of *Shirodhara* by 5 min everyday till threshold point of 45 min achieved and then the period of *Shirodhara* was reduced by 5 min everyday till the basic level of 15 min was achieved. *Ashwagandha* is known for its *Aamnashak*, *Balya*, *Rasayan* and *Awasadak* properties. Its active principle *Somniferin* is having hypnotic property, was helpful to correct his disturbed sleep. *Jatamansi* is known for *Madhur*, *Sheetal*, *Tridoshar guna*. It worked out to be quite helpful in restoring his mental health which was upset since the disorder ensued. *Rudraksha* (*Elaeocarpus ganitrus*) is anti-oxidant, anti-depressant, muscle relaxant and was able to reduce the sustained spasm. *Draksha* (*Vitis vinifera*) is *Pittashamak*, *Raktavardhak*, *Anulomak/ Virechak* and increases appetite, therefore it was used.

*Yastimadhu* (*Glycyrrhiza glabra*) and *Vekhand* (*Acorus calamus*) were administered by chewing (*Buccal/ sublingual route*) to reduce spasmodic dysphonia. *Yastimadhu* when chewed stimulates mucous membrane of throat and larynx. It is traditionally used to treat voice disorders. *Vekhand* (*Acorus calamus*) is *Vatanashak*, and was especially useful in restoring his voice.

**Rasayan chikitsa:** Musta (Cyperus rotundus)+ Guduchi (Tinospora cordifolia) + Amalki (Phyllanthus Emblica) are Rasayan dravyas used for *Apunarbhav chikitsa* which prevented the relapse or recurrence.

*Agnikarma* (Ayurvedic cauterization) has a special place in the treatment of Cervical dystonia and therefore it was executed.

**Sneho Anilo hanti Mrudu karoti deham, Malanam Vinihanti Sangam** II Cha. Siddhi. 1/7

It is mentioned by Charakacharya that Sneha kills Vata, makes the organs/Avayavas of the body soft/ Mrudu; and removes Malas which obstructed the systems.<sup>[16]</sup> We resorted to diminish Vata by instilling Sneha in the form of *Snehan, Abhyang, Siddha ghrita, Kshirpak, Tiktakshir basti, Kati and Manya basti & Pindswed* also. That removed the spasm among cervical muscles and larynx. The combined effect of *Sneha* along with *Rasayan* dravyas like Ashwagandha, Shatavari, Musta, Guduchi and Gokshur administered in various forms facilitated to reduce the *Vata-prakop* and cured Cervical dystonia with Spasmodic dysphonia.

**Table No.1: Treatment chart.**

Type of Treatment	From	To	Details of treatment
Saddhovaman followed by Sansarjan kram & Deepan-Pachan for Shesha-dosha-pachanartha	18.11.2014	20.11.2014	Saddho vaman by ingestion of Vacha siddha milk and Yashtimadhu quath Sitopaladi churna + Avipattikar churna 1 gm each before food BD
Deepan-Pachan Vata Anulomak chikitsa	21.11.2014	30.11.2014	Sitopaladi churna + Avipattikar churna 1 gm each before food BD Hingvastak-churna 1 gm BD
Panchakarma Sarvang snehan-Swedan followed by Yogbasti	21.11.2014	27.11.2014	Niruh by Erand mool + Dashmool followed by Matra-basti by Sahachar tail.
Tiktakshir basti	28.11.2014	12.12.2014	Ashwagandha+ Bala + Kaunch-beej+ Gokshur + Shatavari +Deodar + Parsik yavani+ Guduchi (All crude churna)
Pindsewda	21.11.2014	12.12.2014	<b>Same above</b> + Bala quath +home pounded Rice + Udad dal+Black sesame seeds to be cooked & boiled and wet massage of the mixture when hot to be applied locally to neck, back and complete spine.
Nasya followed by	21.11.2014	12.12.2014	Panchendriya-varadhan tail
Pradhaman-nasya			By Vekhand churna to be placed in line of Praduman nasya
Shirodhara	28.11.2014	12.12.2014	Ashwagandha+ Jatamansi + Dashmool siddha tail for 14 days
Kati basti	19.1.2015	31.1.2015	Sahchar and Narayan tail A/D
Manyabasti	19.1.2015	31.1.2015	Sahchar and Narayan tail A/D
Agnikarma	19.1.2015		Once
Shaman, & Rasayan (Apunarbhav) chikitsa	21.11.2014	14.12.2014	Ashwagandha+ Kavachbeej +Bala + Shatavari + Gokshur+Sunthi 2 gm each Dashamoolarishta 2 TSF BD
	21.11.2014	31.1.2015	Yastimadhu bark+ Vekhand to be chewed TDS
	24.11.2014	14.12.2014	Musta+ Guduchi+Amalki
	15.12.2014	31.1.2015	Ashwagandha+ Kavachbeej +Bala + Shatavari + Gokshur 2gm each Brihatvata chintamani one tab100mg OD
	6.1.2015	19.1.2015	Guduchi + Musta+ Gokshur+ Deodar Siddha-ghrita 1tsf at morning
	15.1.2015	2.2.2015	Fant made of Rudraksha, Jatamansi + Dried Black grapes twice daily

Patient remained as indoor patient from 17.11.2014 to 2.2.2015 and went home fully recovered. Treatment advised on discharge.

Sitopaladi churna + Avipattikar churna 2 gm each before food BD for 6 months

Tab Yograj guggul 250 mg BD for 30 day

Tab.Lakshadigugul 250 mg BD for 30 day

Tab Ekangvir rasa 500 mg BD for 30 days

Tab Brihat vata chintamani 100 mg OD for 30 days

Tab Bramhi vati 250 mg BD for 30 days

Fant made of Jatamansi + Rudraksha + Draksha 40 ml. daily once for 30 days

Ksheerpak/ milk preparation:- Ashwagandha 100 gm + Shatavari 100gm +Kaunchbeej 100 gm + Deodar 50 gm+ Guduchi 50 gm + Jyotishmati Beej-25 in number + Safed Musali 50 gm + Vekhand 10 gm + Sunthi 25 gm (all churna) mix it thoroughly and add half TSF of the mixture in 100 ml milk +100ml water and boil it till 100 ml remains. This Ksheerpak /Siddha dughd was advised to be taken twice daily for six month.

*Pind-swed, Snehan-Swedan, Nasya* as mentioned above for 1 month. Then Sarvang *Snehan-Swedan* once weekly for 3 months.

**Response to treatment:-** There was marked improvement in the clinical condition. He was able to flex the neck within 15 to 20 days of Ayurvedic treatment, which Modern Science was not able to do for more than one year, and for which poor patient had to spent lacs of Rupees but it was all in vain. His voice was restored gradually within 75 days of Ayurvedic treatment. Patient was asked to chant Omkar in long and sustained manner. Omkar pronunciation enabled him to regain his voice faster.

Now the case is completely normal, no recurrence for last more than 6 years.



**Figure No. 1 and 2 Before treatment.**



**Figure No. 3: During treatment.**



Figure 4 & 5: Complete recovery after 75 days of treatment.

### CONCLUSION

This case is the testimony of strength and ability of Ayurved to treat such disorder like Cervical dystonia with Spasmodic dysphonia where Modern Science had limitations. The rapidity in clinical improvement due to Ayurvedic treatment was most noteworthy.

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