

Ayurvedic management for a rare disorder Takayasu arteritis – A case report

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Abstract

Takayasu arteritis (TA) is a rare disorder and it is a devastating condition of aorta. The presently available treatments for the condition in the modern medicine have limited benefits. This is case of TA which was better managed with Ayurvedic intervention. An Ayurvedic diagnosis for this case was *Siragata Vata* (vitiated *Vata Dosh*a affecting the blood vessels). A 42-year-old woman was diagnosed with TA and treated on the line of management of *Siragata Vata* with *Shastikashali Pinda Swedana* (sudation with bolus of medicated cooked rice) for 16 days, *Erandamuladi Niruha Basti* (enema mainly with decoction) along with *Ashwagandha Taila Anuvasana* (enema with medicated oil) for 16 days in *Kala Basti Krama* (16 days in alternate order of decoction and oleation enema) followed by one day gap and then 7 days of *Nasya Karma* (nasal therapy) with *Triphaladi Taila* (oil) on alternate days along with a combination of Ayurvedic oral drugs [*Brihadvatachintamani Rasa*-125 mg, *Dashamula Kwatha*-40 ml, *Narsinha Churna* (powder)-3 g, *Yogaraja Guggulu*-1g (500mgx2tab) and *Shiva Gutika*-500 mg, twice a day for 1 month. Same *Panchakarma* procedures were repeated after 6 months. A similar combination of oral medications were continued in between and during this period. *Chyavanaprasha Avelaha* in the dose of 10g twice a day with milk were also added after completion of this treatment regime. Patient condition was assessed on Indian Takayasu Clinical Activity Score (ITAS-2010) for disease activity of TA. Satisfactory results were observed in the patient with improvement in ITAS-2010 scoring. TA may be managed with Ayurvedic drugs and *Panchakarma* procedures.

Keywords: Ayurveda, *Siragata Vata*, Takayasu arteritis, *Vata Vyadhi*

Introduction

Takayasu arteritis (TA) is a chronic granulomatous inflammation of large arteries characterized by nonspecific symptoms-such as hypertension, headache, fever, arthralgia, muscle pain, night sweats and weight loss.^[1] If not treated in acute early phase, the disease affects the aorta and its main branches. Vessel wall inflammation leads to concentric wall thickening, fibrosis, thrombus formation, stenosis of affected vessels and vascular remodeling. This leads to end-organ ischemia-such as renal infarction and stroke. Takayasu arteritis was named after Mikito Takayasu by Yasuzo Shinmi in 1939.^[2] The disease is also known as pulse less disease. TA is rare, but most commonly seen in Japan, South East Asia, Mexico and India. The incidence of TA in adults is estimated to be 2.6/million/year in North America. In India, female to male ratio is 1.7:1.^[3] The onset of disease is mainly in second or third decade of life.^[4] There is no specific laboratory marker for TA. However, erythrocytes sedimentation rate (ESR) is considered the best

available routine laboratory indicator for disease activity of TA in adolescents. Diagnosis can be confirmed only by imaging such as magnetic resonance angiography (MRA), computed tomography angiography (CTA) or doppler ultrasound.

In this case, patient had been suffering from TA. The patient was treated with Ayurvedic medication and *Panchakarma* procedures on the general line of management of *Vata Vyadhi* (various neuro-musculoskeletal diseases). *Siragata vata* (vitiated *Vata Dosh*a affecting the blood vessels) was considered as an Ayurvedic diagnosis for TA. Indian takayasu clinical activity score (ITAS-2010) scoring and improvement in clinical symptoms were observed in the patient.

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Case Report

A 42-year-old woman reported to the outpatient department of National Institute of Ayurveda Jaipur on April 14, 2015, for complaints of tingling sensation in fingers of the right hand and around neck region, numbness in right upper limb, and right lower limb for few seconds. She had feeling of general fatigue, occasional headache and dizziness when she changed the position of her head. She experienced instant chest pain on the right side which was not related with any activities or time of the day.

The patient had been experiencing these complaints for 16 months. She had consulted rheumatology department of an allopathic hospital and a year ago before coming to Ayurveda hospital. Magnetic resonance imaging angiography indicated TA. An absence of arm pulse bilaterally was noticed during first pregnancy in year 2000 following which the blood pressure was monitored in the lower extremities. Transient cyanosis in hands was noticed during the first pregnancy just before delivery. In 2004, she had right thoracic herpes zoster which resolved completely. The patient had also suffered from longitudinal extensive transverse myelitis (LETM) in 2014 from which she completely recovered clinically. She was on prednisolone 60 mg for a day and mycophenolate mofetil 1000 mg twice a day since August 23, 2014 for TA but had stopped the treatment from last 3 months due to increased weight and abnormal liver profile. She was admitted in the inpatient department of *Panchakarma* department of National Institute of Ayurveda on April 14, 2015, for the administration of *Panchakarma* procedures.

Clinical findings

On physical examination, patient was anxious, body weight was 79 kg, height was 155.7 cm and body temperature was 37.5°C. Patient had *Vata Pitta* pre dominance *Prakriti* with *Madhyama Sara* (medium strength), *Madhyam Samhanana* (medium built), *Sama Pramana* (proportionate body), *Madhyama Satmya* (medium homologation), *Madhyam Satva* (medium mental strength), *Madhyam Vyayamshakti* (medium capability to carry on physical activities), *Madhyama Ahara Shakti* (medium food intake capacity) and *Uttama Jaranashakti* (optimum digestive power).

On neurological examination, higher mental function-attention, memory, calculation abstract thought, spatial perception, visual and body perception, and speech were normal. On cranial nerve examination, Grade I nystagmus to left gaze was found. Visual acuity was normal. Slit-lamp examination of the eye and audiometric results were normal. On motor examination, bulk, tone, power and coordination of upper limbs and lower limbs were normal. Joint position sense and vibration sensation was normal.

On cardiovascular examination, pulse in both upper arms was absent. In the neck region, right carotid pulse was forceful and left carotid pulse was not palpable. Pulse in lower extremities

was normal. No bruits on the carotid and renal artery were found. Blood pressure could not be measured from the upper limbs. BP was 120/76 mmHg measured from the lower limbs. Auscultation of the chest showed no heart murmur or crackles. Pulse of the right brachial and radial arteries was palpable but feeble. Pulse of the left brachial and radial arteries was not palpable. Pulse rate and respiratory rate was 60/min and 18/min, respectively. Skin, cardiorespiratory, musculoskeletal, and genitourinary system examination was normal.

Timeline

A detail of the case study and follow-up is given in Table 1.

Diagnostic focus and assessment

Patient was a known case of TA. CTA of the brain and neck revealed-severe stenosis (approx. 90%–95%) of right subclavian artery, complete block of left subclavian artery and proximal left vertebral artery with normal CTA of brain that is a suggestive of TA [Figure 1]. TA was graded as Type I, on the basis of angiographic findings and in group I, on the basis of Ishikawa clinical classification. These grading denoted the better prognosis of the case.

Atherosclerosis, giant cell arteritis, polyarteritis nodosa, infectious aortitis, secondary vasculitides and developmental abnormalities (coarctation of the aorta and marfan syndrome) are the differential diagnoses of TA. Atherosclerotic plaques

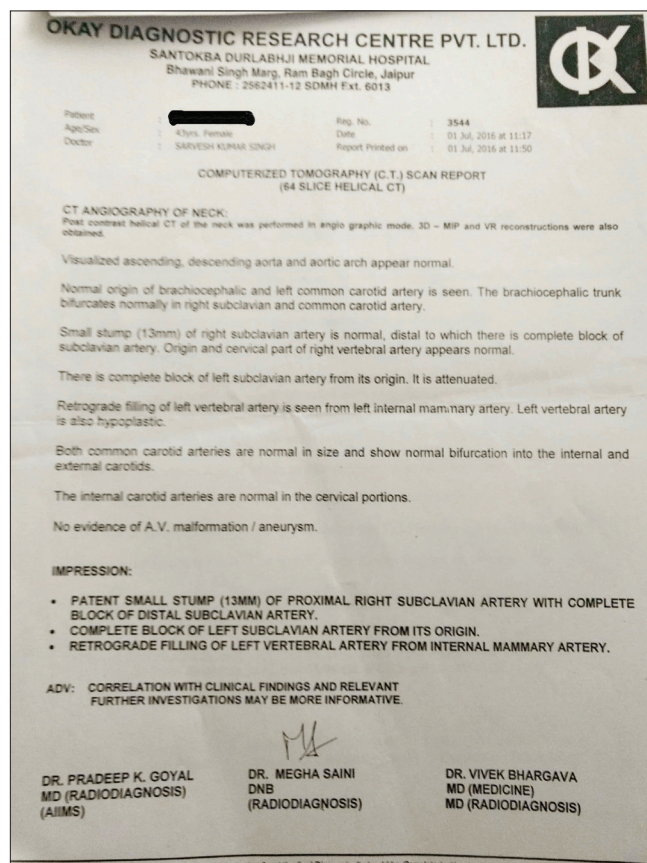


Figure 1: Supporting material (CT Angiography for brain and neck in July 2014)

Table 1: Timeline

Year	Incidence/intervention
2000	Absent arm pulses noticed in first pregnancy. Blood pressure of the patient was used to measure from leg since 2000
2004	Patient had suffered from herpes zoster
2013	CT angiography of brain and neck that revealed severe stenosis (approximately 90–95%) of right subclavian artery, complete block of left subclavian artery and proximal left vertebral artery with normal CT angiography of brain that is a suggestive of takayasu arteritis
2014	MRI cervical spine that was done on dated July 29, 2014 and October 14, 2014 revealed mild T2W hyper intensity seen within cord parenchyma extending from cervicomedullary junction to C4 levels predominantly involving grey matter and central zone (R>L) with minimal expansion and without atrophy of the cord-the diagnosis of longitudinal extended transverse myelitis. Anti-aquaporin-4 (NMO-IGG) antibodies was strongly positive. VZV culture and DNA PCR was negative. Anti-nuclear antibodies and serology triple was negative
April 14, 2015	Patient was admitted in I.P.D of National Institute of Ayurveda
April 14, 2015- May 17, 2015	Castor oil in the dose of 20 ml with Luke warm milk was given for first 3 consecutive nights. <i>Shastikashali Pinda Swedana</i> was done for 16 days starting from 1 st day. From 4 th day <i>Niruha Basti</i> alternated with <i>Ashwagandha Taila Anuvasana</i> was given for 16 days. After completion of Basti procedure <i>Nasya Karma</i> with <i>Triphaladi Taila</i> (oil) in a dose of 6 drops (4.5 ml)/nostril was done on alternate days for 7 days. Along with these <i>Panchakarma</i> procedures some ayurvedic oral drugs were also prescribed such as <i>Yogaraja Guggulu</i> , <i>Shiva Gutika</i> , <i>Dashamula Kwatha</i> , <i>Narsinha Churna</i> and <i>Brihadvatantamani Rasa</i> . (ITAS-2010) was 17 at the time of admission and it changed to 05 after completion of <i>Panchakarma</i> procedures. BP was measurable from both upper limbs at the time of discharge. Ayurvedic oral medication was further continued except <i>Brihadvatantamani Rasa</i>
June 25, 2015	MRA revealed no new lesion and no worsening of takayasu arteritis
July 15, 2015	MRI scan of cervical spine revealed reduction in the intensity of altered signal and its transverse extent within the cervical cord (in comparison of previous MRI dated October 24, 2014), however longitudinal extent remains more or less same and no obvious new lesion was seen
November 17, 2015-December 16, 2015	Same <i>Panchakarma</i> procedures and oral medication was repeated. ITAS-2010 scoring was 03
December 17, 2015-January 30, 2016	Same oral medications were continued

Contd...

Table 1: Contd...

Year	Incidence/intervention
December 2015 and 29/01/16	MRA and CT angiograph was conducted which revealed no new lesion for takayasu arteritis
February 2016- June, 2018	Only <i>Chyavanaprasha Avaleha</i> is given as oral medication. ITAS-2010 scoring was 04 on June 13, 2018
Since June 2018	Follow up was scheduled annually. Patient condition is stable

CT: Computed tomography, MRI: Magnetic resonance imaging, MRA: Magnetic resonance angiography, VZV: Varicella zoster virus, DNA: Deoxyribonucleic acid, PCR: Polymerase chain reaction, ITAS: Indian takayasu clinical activity score

are commonly found in patients aged 45 years and above and also not usually associated with long segment luminal stenosis. Giant cell arteritis mostly affects patients older than 50 years. Branches of the external and internal carotid arteries are most frequently affected in giant cell arteritis. Polyarteritis nodosa commonly affects 30–50 years old, predominantly males, renal arteries, gastrointestinal arteries as the primary sites diseased and multiple small aneurysms in the involved artery. Development abnormalities are not associated with stenotic lesions in large vessels. Varicella zoster virus (VZV) culture and deoxyribonucleic acid (VZV), serology triple and oligoclonal bands test were negative for the case so infectious aortitis (tuberculosis, syphilis, *Staphylococcus aureus* and *Salmonella*, treponema, cyto-megalo virus or herpes virus) is unlikely. Test for antinuclear antibody was negative and no lupus was found, so secondary vasculitides (systemic lupus erythmatosus and sarcoidosis) were ruled out. Antiaquaporin-4 (NMO-IGG) antibodies were seropositive as the patient was suffering from longitudinally extensive transverse myelitis (LETM) in past. Hence, TA was the diagnosis for the patient [Table 2]. Any disease can be considered as *Vata Vikara* (diseases by *Vata Dosha*) if it have the symptoms of *Shosha* (atrophy/weight loss), *Shoola* (pain), *Supti* (paresthesia, tingling sensation), *Sankocha* (concentric wall thickening/contracture), *Stambhana* (stenosis/stiffness), and *Khanjata* (limping).^[5] All these symptoms remain present in TA, hence, it can be considered as *Vata Vikara*. More specifically, TA can be correlated with *Siragata-Vata*, a disease of *Vata Vyadhi* spectrum. *Manda Sharira Ruja* (mild body pain) *Shopha* (inflammation) and *Shosha* (atrophy/loss of weight), *Spandana* (fasciculation) in the body, *Supta Sira* (absence of pulsation in the blood vessels/arteries), *Tanavyo Sira* (spasm of vessels leading to reduction of lumen/thinning of vessels/stenosis) and *Mahat Sira* (dilatation of vessels/aneurysm) are the manifestation of the *Siragata-Vata*.^[6] Aneurysms, segmental narrowing, and variations in the calibre of arteries and stenosis/occlusions are the manifestation of vasculitis^[7] and these are also the manifestation of *Siragata Vata*. TA is also described as pulse less disease and having stenosis of the large vessels as cardinal feature. These symptoms are described as *Supta Sira* and *Tanavyo Sira* in *Siragata-Vata* disease. Hence, *Siragata-Vata* was considered as the Ayurvedic diagnosis for this case of TA.

Table 2: Laboratory investigations

Laboratory investigations	Values	Dated
Hematological investigations		
WBC	5900 th /uL	May 14, 2015
Neutrophils (%)	64	
Lymphocytes (%)	30	
Monocytes (%)	3	
Eosinophils (%)	3	
Basophils (%)	0	
Haemoglobin (g/dL)	12.1	
Platelets (lac/uL)	2.65	
ESR (mm/h)	15	
Biochemical investigations		
RA factor	Negative	May 14, 2015
ASLO	Negative	
Renal function test		
Blood urea (mg %)	29.0	May 14, 2015
Serum creatinine (mg/dL)	0.8	
Liver function test		
SGOT (IU/L)	106	May 14, 2015
SGPT (IU/)	98	
Alkaline phosphate (IU/L)	185	
Thyroid assay	Within limits	May 14, 2015
Urine analysis (routine and microscopic)	Within limits	
VZV culture and DNA detection	Negative	July 21, 2014
ANA	Negative	July 15, 2014
Serology triple-	Negative	July 15, 2014
Anti-aquaporin-4 (NMO-IGG) antibodies-	Strongly positive	July 31, 2014
ESR	34	January 28, 2016
ESR	79	February 22, 2016
ESR	30	May 10, 2016
ESR	43	July 01, 2016
ESR	40	August 22, 2016

ANA: Anti-nuclear antibodies, VZV: Varicella zoster virus, ASLO: Antistreptolysine O titre, ESR: Erythrocyte sedimentation rate, WBC: White blood cell, DNA: Deoxyribonucleic acid, SGOT: Serum glutamic-oxaloacetic transaminase, SGPT: Serum glutamic pyruvic transaminase

Therapeutic intervention

There is no specific treatment advised for *Siragata-Vata* in classical texts. Hence, general line of treatment of *Vata Vikara viz. Snehana* (oleation), *Swedana* (sudation) *Niruha Basti* (enema mainly with decoction), *Anuvasana Basti* (enema with medicated oil), and *Nasya Karma* (nasal therapy) was adopted for the patient.^[8] According to *Ayurveda*, *Siragata-Vata* is a disease of *Madhyama Roga Marga* (disease pathway related to vascular system and other vital organs); hence, *Basti Karma* was also adopted for treatment. Castor oil in the dose of 20 ml with milk was given for first three consecutive nights for *Koshtha Shuddhi* (evacuation of the bowel). *Shastikshali Pinda Swedana* was done for 16 days starting from the 1st day. From 4th day, *Erاندamuladi Niruha Basti*^[9] alternated with *Anuvasana Basti* of *Ashwagandha Taila*^[10] was given for 16 days. After

the completion of *Basti* procedure, *Shirovirechana* (nasal therapy for purification), a form of *Nasya Karma* with *Triphaladi Taila* (oil) in a dose of 06 drops (0.4 ml)/nostril was done on alternate days for 7 days [Table 3]. Ayurvedic oral medicines such as *Yogaraja Guggulu*-1 g (500mgx2tab), *Shiva Gutika*-500 mg, *Dashamula Kvatha*-40 ml, *Narsinha Churna*-3 g, *Brihadvatachinamani Rasa* 125 mg twice a day were prescribed to the patient [Table 4]. These oral medicines except *Brihadvatachinamani Rasa* were prescribed up to 30 January 2016. *Brihadvatachinamani Rasa* was prescribed initially only for 1 month. Same *Panchakarma* procedure was repeated after 6 months from November 17, 2015 to December 16, 2015. *Chyavanaprasha Avaleha* in the dose of 10 g with milk was advised twice a day after meals from February 2016 to June 2018.

Follow-up and outcome

Patient's condition was assessed on Indian ITAS-2010, which is validated in Indian patients for disease activity of TA.^[11] Features of domains – systemic, abdomen, cardiovascular system, genitourinary, renal (systolic and diastolic hypertension), and nervous system are comprises in ITAS2010 and are scored if new or worse over the past 3 months. Weightage are given for diastolic hypertension, bruits, new pulse loss, pulse inequality, stroke, carotidynia and claudication. A maximum score of 51 is possible in this scoring and score of 4 or more is considered active. Score was 17 at the time of admission and it changed to 05 after completion of *Panchakarma* procedures [Table 5]. After 1 month of treatment, BP was measurable from both upper limbs, but pulse in the left upper limb and left carotid artery was weak. Unequal BP in both upper limbs was noted. BP in the right hand was 120/76 mmHg and in the left hand was 110/68 mmHg. MRA which was done on June 25, 2015 showed that the TA was stable and there was no new lesion [Figure 2]. ITAS-2010 score was 03 after 06 months. MRA done on November 2015 and CT angiograph done on January 29, 2016 and July 1, 2016 revealed no new lesion for TA in the case [Figures 3 and 4]. ITAS-2010 score was 4 on June 13, 2018. Follow-up of the patient was scheduled annually since June 2018. The patient was assessed on June 21, 2019 and her condition was stable and there was no relapse of any manifestation at that time.

Discussion

TA disease is having the close resemblance with *Siragata-Vata*. The disease is included in *Vata Vyadhi*. General line of treatment of *Vata Vikara*, namely *Snehana*, *Swedana*, *Asthapana*, *Anuvasana* and *Shirovirechana* was adopted in the patient. *Mridu Virechana* was given with castor oil. *Shastikshali Pinda Swedana* which is a combination of *Abhyanga* (massage) and *Mridu Swedana* (mild sudation) was given to the patient. It was done on whole body as TA can affect multiple organs. It is shown to provide a good result in the management of various *Vata Vyadhi*.^[12,13] In TA, occlusion and stenosis of artery and aorta are more prominent. *Shiragranthi* (knot in micro-channels) type of *Srotodushti* (vitiation of

Table 3: Panchkarma procedures given to a case of Takayasu arteritis

Panchakarma procedures	Method of preparation	Method of application	Days of treatment
<i>Shalisastika Pinda Svedana</i>	400 g of <i>Shastikshali</i> (specific variety of rice, which is yielded after 60 days) is cooked with 1.5 Litre of milk and decoction of <i>Bala (Sida cordifolia</i> L.) root. This mixture is to be kept in four pieces of cloth to make 4 boluses. Another portion of milk and decoction of the same quantity should be mixed and heated in low temperature to dip the above boluses for warming 75 ml of oil mixed with rock salt	Massage with <i>Ashwagandha Taila</i> was done on whole body for 15 min followed by whole body massage for 45 min with the help of a cotton bag filled with bolus of processed rice	16 days
<i>Ashwagandha Taila Anuvasana Basti</i>	<i>Saindhava</i> salt 10 g, honey 50 g, <i>Ashwagandha Taila</i> 75 ml, <i>Panchatikta Ghrita</i> 50 ml and	Given after meal with <i>Basti Yantra</i>	Total 10 <i>Basti</i> in <i>Kala Basti</i> manner
<i>Erandamuladi Niruha Basti</i>	decoction of <i>Erandamuladi</i> drugs 400 ml. Powdered rock-salt is added to honey and stirred. Then <i>Taila</i> and <i>Ghrta</i> are added to this mixture and again stirred. Then paste of <i>Shatahwa (Anthem sowa</i> Kurz) followed by decoction is to be added and mixed properly to make homogenous emulsion, and heated gently in a water bath	Given before meal with <i>Basti Yantra</i>	Total 06 <i>Basti</i> in <i>Kala Basti</i> manner
<i>Nasya Karma</i> with <i>Triphaladi Taila</i>		After local massage and sudation of head, forehead and face, <i>Triphaladi Taila</i> in a dose of 6 drops/nostril was instilled followed by gentle massage and <i>Dhumpan</i> through nostril (smoking) with <i>Dashamula</i> vapors	After completion of <i>Basti</i> procedure <i>Nasya Karma</i> was done on alternate days for 7 days

Table 4: Ayurvedic medication given to a case of Takayasu arteritis

Name of the drug used orally	Source	Dose	Anupana (vehicle)	Days of treatment (months)
<i>Yogaraja Guggulu</i>	National Institute of Ayurveda Pharmacy, Jaipur	1 g (500mgX2tab) twice a day before meals	Honey	8
<i>Dashamula Kwatha</i> (decoction of 10 roots)	National Institute of Ayurveda Pharmacy, Jaipur	40 ml twice a day before meals	Milk	1
<i>Brihatvatachintamani Rasa</i>	Dabur India limited	125 mg twice a day after meals	Milk	8
<i>Narsinha Churna</i>	Krisna Gopal Ayurveda	3 g twice a day after meals	Milk	29
<i>Shiva Gutika</i>	Bhawan (Kaleda)	500 mg twice a day after meals		
<i>Chyavanaprasha Aveleha</i>	Sri Navjeevan Rasayanshala, Jaipur	10 g twice a day after meals		
	Dabur India limited	10 g twice a day after meals		

Table 5: Indian Takayasu arteritis scoring (Indian Takayasu clinical activity score-2010)

Domain	Scoring on dated			
	April 14, 2015	May 17, 2015	December 16, 2015	May 13, 2018
1. Systemic (malaise/Wtloss >2 kg, myalgia/arthritis/arthritis, headache)	2	0	0	0
2. Abdomen (severe abdominal pain)	0	0	0	0
3. Genitourinary system (abortions)	0	0	0	0
4. Renal hypertension (diastole >90), (systolic >140)	0	0	0	0
5. Nervous system (stroke, seizures, syncope, vertigo/dizziness)	1	0	0	0
6. Cardiovascular system (bruits, pulse inequality, new loss of pulse, claudication, carotidodynia, aortic incompetence, myocardial infarct/angina, cardiomyopathy/cardiac failure)	14	5	3	4
Total	17	5	3	4

micro-channels) is the pathogenesis of stenosis. Stenosis is considered in Ayurveda as *Margavarodha* (obstruction

in natural passage of *Vata Dosha*) or *Stambhana* or *Tanvi Sira* and can be removed by *Shastikashali Pinda Swedana*

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DATE: November 25, 2015 ID.NO: 8296
CONTRAST: Nonionic REF. BY: DR. SARVESH KUMAR SINGH

COMPUTERIZED TOMOGRAPHY (C.T.) SCAN REPORT
(64 SLICE HELICAL CT)

CT ANGIOGRAPHY OF BRAIN AND NECK:
Post contrast helical CT of the brain and neck was performed in angio graphic mode. 3D – MIP and VR reconstructions were also obtained.

Aortic arch appears normal with normal take-off of right brachiocephalic and left common carotid arteries. Left subclavian artery is blocked at its origin. Left vertebral artery is blocked in proximal 12mm segment and patent in remaining segment likely retrograde filling of vertebral artery.

Right subclavian artery is patent in proximal segment (approx. 18mm length) and blocked distally. Vertebral artery origin is normal.

Main pulmonary artery is prominent measuring 27mm in diameter. Aortic arch measures 25mm at same level.

Both common carotid arteries are normal in diameter and show normal bifurcation into the internal and external carotids.

The internal carotid arteries are normal in the cervical and cranial portions.

Both vertebral arteries are normal in calibre and course. Basilar artery also appears normal.

Circle of Willis is well defined and appear normal.

Anterior, middle and posterior cerebral arteries are well visualized and appear normal in their course and branching pattern.

Both posterior cerebral arteries show fetal origin.

Plain sections of brain are unremarkable.

IMPRESSION:

- LEFT SUBCLAVIAN ARTERY THROMBOSIS FROM ITS ORIGIN WITH RETROGRADE FILLING OF VERTEBRAL ARTERY.
- THROMBOSIS OF RIGHT SUBCLAVIAN ARTERY APPROX. 18mm FROM ITS ORIGIN.
- NORMAL CT ANGIOGRAPHY OF BRAIN (BILATERAL FETAL PCA).

ADV: CORRELATION WITH CLINICAL FINDINGS AND RELEVANT FURTHER INVESTIGATIONS MAY BE MORE INFORMATIVE

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Figure 2: Supporting material (CT Angiography for neck in June 2015)

and *Basti* procedures. *Erandamuladi Niruha Basti* is helpful in treating *Vata Kaphaja* (diseases due to *Vata Dosha* and *Kapha Dosha*) disorders, *Pakshaghata* etc. It has *Srotoshodhana* (purification of micro channels) property hence it may remove occlusion of vessels. Right subclavian artery, left subclavian artery and left vertebral artery were affected in the case which affected the blood supply for both arms and the head. *Shirovirechana* is indicated for the diseases above the clavicle region. Hence, *Shirovirechana* was done with *Triphaladi Taila* which has *Vata Kaphahara* (suppression and removal of deranged *Vata Dosha* and *Kapha Dosha*) property.^[14] It may be helpful in removing the obstruction of *Vata Dosha* at supra clavicular region. *Brihadvatantamani Rasa* is indicated in all type of *Vataja* (disease due to *Vata Dosha*) and respiratory diseases.^[15] *Dashamula Kwatha* is useful in all types of *Vataja* and respiratory disorders and has *Tridoshaghna* (alleviating deranged *Dosha* of the body) property.^[16] *Yogaraja Guggulu* is useful in all types of *Vataja* (neurodegenerative) disorders.^[17] *Shiva Gutika* can treat *Shosha* (emaciation or weight loss) and has *Rasayana* (immunomodulatory) property and helpful in diseases of mouth, head and eye.^[18] *Narsinha Churna* is indicated in all types of *Vata Vyadhi* and it is also having the property of *Vajikarana* (aphrodisiac property).^[19] The combination of all these drugs may treat all the manifestation

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COMPUTERIZED TOMOGRAPHY (C.T.) SCAN REPORT
(64 SLICE HELICAL CT)

CT ANGIOGRAPHY OF NECK:
Post contrast helical CT of the neck was performed in angio graphic mode. 3D – MIP and VR reconstructions were also obtained.

Aortic arch appears normal with normal take-off of right brachiocephalic and left common carotid arteries. Left subclavian artery is blocked. Left vertebral artery is thin and patent.

Right subclavian artery is visualized in proximal 18mm segment and blocked distally. Vertebral artery origin is normal.

Both common carotid arteries are normal in size and show normal bifurcation into the internal and external carotids.

The internal carotid arteries are normal in the cervical and cranial portions.

Both vertebral arteries are patent with right side dominance. Basilar artery also appears normal.

No evidence of A.V. malformation / aneurysm.

Note is made of bilateral fetal PCA.

Internal jugular veins, subclavian veins, brachiocephalic vein and SVC appear normal.

IMPRESSION:

- LEFT SUBCLAVIAN ARTERY OCCLUSION FROM ITS ORIGIN.
- RIGHT SUBCLAVIAN ARTERY OCCLUSION APPROX. 18mm FROM ITS ORIGIN.

ADV: CORRELATION WITH CLINICAL FINDINGS AND RELEVANT FURTHER INVESTIGATIONS MAY BE MORE INFORMATIVE

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Figure 3: Supporting material (CT Angiography for brain and neck in November 2015)

and complication due to TA. *Brimhana* (nourishment up to tissue level) is the main treatment of *Nanatamaja Vata Vyadhi* and *Rasayana* must be prescribed to any chronic *Vata Vyadhi*.^[20] *Brahadvatantamani Rasa* has *Rasayana* property and is popular in Ayurvedic practices for various diseases of rheumatic spectrum. *Chyavanaprasha Avaleha*^[21] is important for longer uses as *Rasayan* and is indicated in chronic *Vatavyadhi*, *Nanatmaja Vata Vikara* and *Avrita Vata Vikara*.^[22] Thus, these combinations of Ayurvedic oral medications are useful in treating the patient.

The modern treatments of TA have lots of adverse effects.^[23] There is a need to watch liver profile at certain interval as changes in liver profile are more prominent during high dose steroid and mycophenolate mofetil administration. In the present case, ESR, serum glutamic-oxaloacetic transaminase and serum glutamic pyruvic transaminase levels were within normal limits after 1 year of Ayurvedic management. This may suggest the safety of Ayurvedic regime in this case. Pulse was noticeable in both upper limb and BP was measurable from upper limbs. This might be considered as remarkable improvement, since very few cases published in Pub Med reported this improvement even after using high doses of steroid.^[23] It is now accepted that approximately half of patients of TA which are treated with steroids may respond.^[24] There is uncertainty in success and also more side effects are associated with use of steroid,

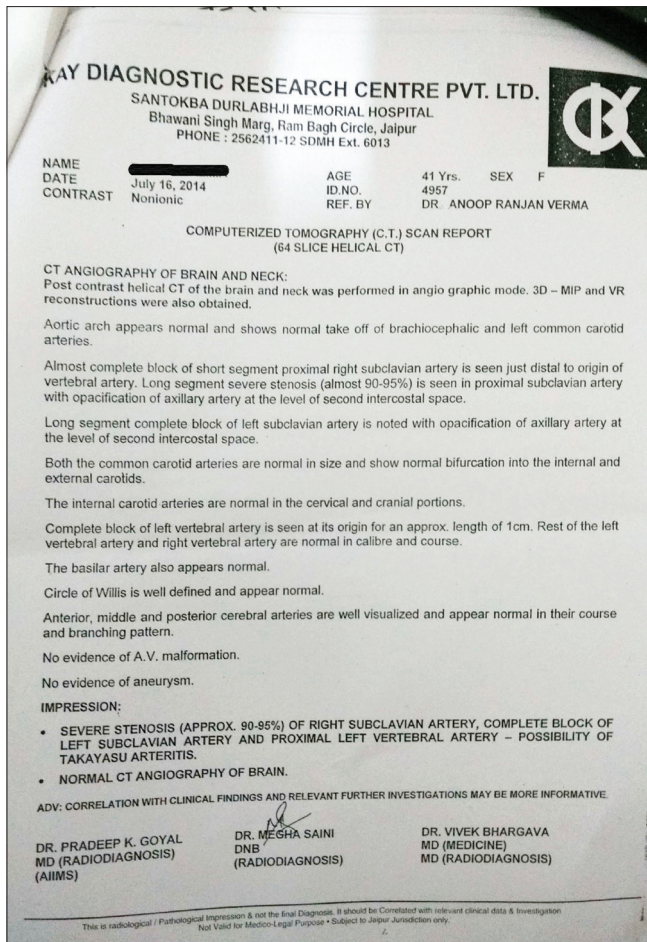


Figure 4: Supporting material (CT Angiography for neck in July 2016)

biological agents and mycophenolate mofetil. Apart from this multi-centric trial involving 34 patients for efficacy of abatacept (CTLA4-Ig) in maintaining relapse-free survival of TA patients over placebo did not revealed any difference.^[25] The primary aim of the Ayurvedic management was to control the disease activity and preserve vascular competence. ITAS 2010 scores were 4 or more than 4 during most treatment periods. This indicated that the disease was active. However low ITAS 2010 scores showed satisfactory response of the treatment. Ayurveda can only provide palliative management to this case of TA considering the incurable nature of the disease. However considering the uncertainty about complications of TA the case needed periodical imaging, cardiovascular assessment and surgical intervention if symptoms worsen. Arterial blood analysis must be done periodically which was lacking in this study due to patient's reluctant nature and economic status. The patient was advised to consult annually. The condition of the patient was stable when she was lastly assessed. There was no worsening in disease condition. This was an important finding considering the prognosis of the disease. Understanding of the etiology and pathophysiology of the *Siragata-Vata* disease may be helpful in the context of TA which is mostly unknown. The findings of the case is important as it throws new light on the possible treatment of TA through Ayurvedic management. This

case study shows that Ayurvedic management may be beneficial in the management of TA.

Conclusion

The case study shows that Takayasu arteritis (TA) was managed with Ayurvedic medication and *Panchakarma* procedures with satisfactory outcome. More studies are required to be done to confirm these findings and establish the place of Ayurvedic line of treatment in the management of TA.

Patient consent

Written permission for publication of this case study had been obtained from the patient.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Patient's perspective

Patient was satisfied with the provided treatment.[Video-1]

Financial support and sponsorship

The treatment and consultation of the patient was done at the nominal registration fees and most of the medication, therapy and investigation were provided free of cost by the institute. MRA cost and some of the medicines which are not provided by the institute were afforded by the patient.

Conflicts of interest

There are no conflicts of interest.

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