



CASE REPORT

Ayurvedic Management in Covid Vaccination induced Shoulder Injury (SIRVA)-A case report

Dr Vinuraj S*, Dr Sheela S**, Dr Delna Pavithram ***, Dr Arjun C M ***,

* Associate Professor, Dept of Swasthavritta Govt Ayurveda College Kannur

** Professor, Dept of Swasthavritta Govt Ayurveda College Kannur

*** Assistant Professor, Dept of Swasthavritta Govt Ayurveda College Kannur

*Email: drvinurajs@gmail.com

ARTICLE HISTORY

Received: 22 March 2023

Accepted: 09 June 2023

Available online

Version 1.0 : 30 June 2023

Keywords

Case Report, SIRVA, Ayurvedic Management

Additional information

Peer review: Publisher thanks Sectional Editor and the other anonymous reviewers for their contribution to the peer review of this work.

Reprints & permissions information is available at <https://keralajournalofayurveda.org/index.php/kja/open-access-policy>

Publisher's Note: All Kerala Govt. Ayurveda College Teacher's Association remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright: © The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited (<https://creativecommons.org/licenses/by/4.0/>)

CITE THIS ARTICLE

Vinuraj S, Sheela S, Arjun C M, Delna Pavithram.

Ayurvedic Management in Covid Vaccination induced Shoulder Injury (SIRVA)-A case report. Kerala Journal of Ayurveda. 2023; 2(2): 05-08.

<https://doi.org/10.55718/kja.152>



Abstract

Shoulder Injury Related to Vaccine Administration- "SIRVA"- is a potentially debilitating injury characterized by persistent shoulder pain, restricted joint movements and weakness. In the case of SIRVA, the pain will persist and even worsen with time. Common complaints will include pain at rest, increased pain with active shoulder motion, loss of shoulder range of motion and strength, infection, and radiating pain or tingling distally into the extremity. Persistent weakness for a long time may lead to subluxation of the shoulder joint. The condition is usually managed by conservative treatment in the modern system of medicine. Still, some cases do not resolve and need surgery. Such cases can be effectively managed by Ayurvedic treatment mainly emphasizing *Sophahara*, *Srothosodhaka*, *Vatanulomaka*, *brimhana*, *Rasayana* actions and *Sandhi sthapanopaya* methods. This study demonstrates an Ayurvedic approach in the management of Shoulder Injury Related to Vaccine Administration- "SIRVA" developed after Covid vaccination.

Introduction

Shoulder Injury Related to Vaccine Administration "SIRVA" is a recognized vaccine injury. SIRVA symptoms typically include pain at or around the site of vaccination, limited range of motion and associated weakness. SIRVA can encompass one or a number of specific diagnoses, including bursitis, impingement syndrome of the shoulder, adhesive capsulitis, and rotator cuff tear. Pain is a hallmark symptom and the pain may be gradual or sudden in nature. If left untreated, the pain may continue to worsen, and may also limit mobility of the shoulder. Individuals may feel increased pain with the use of the affected arm.

Over time, bursitis can cause weakness of the upper arm which progresses into subluxation of the shoulder joint. The relationship between vaccine injection into synovial tissue and inflammation of the structures underlying the deltoid muscle has been well established¹. Although sub acromial sub deltoid bursitis is a common health problem its occurrence with in the context of SIRVA is still under reported in the literature².

In this case study Ayurvedic management of Shoulder joint weakness and subsequent subluxation following Covid-19 vaccination are reported.

Case report

A 67-year-old female patient presented to the OPD of Swasthavritta with complaints of severe pain over the left side of the hand and neck associated with wasting, limited range of motion and weakness of left-hand since 1 year following covid vaccination which she took in August 2021. X-ray showed subluxation of left shoulder joint (Figure1). During the detailed physical examination, the following parameters were considered (Range of movement, muscle wasting, resting pain and muscle weakness) (Table 3).

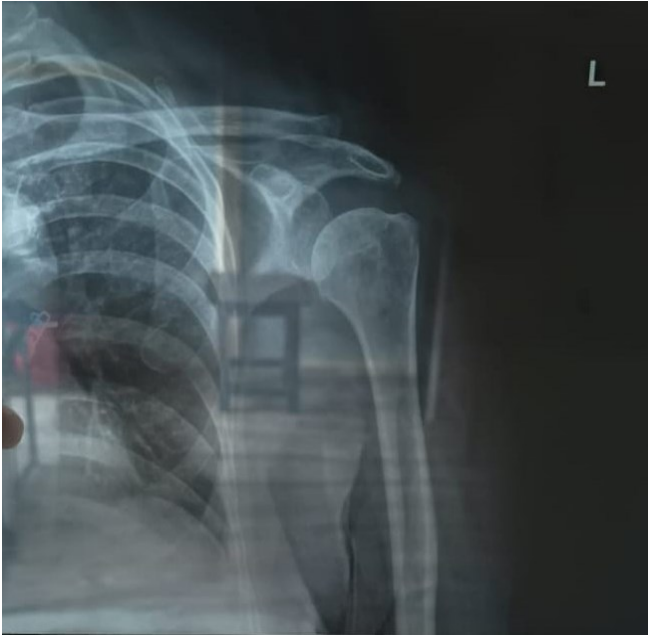


Figure1-X-ray at admission

She was diagnosed with Diabetes and hyper lipidemia since 10 years. There was no history of other systemic illness. She was admitted to the Swasthavritta ward. On examination, her body constitution (*Prakrithi*) was *pitta kaphaja*. Her digestive power (*Agni Bala*) and physique (*Sharirabala*) were poor (*Avara*). Her clinical symptoms gradually improved after Ayurvedic IP management with internal and external medications.

Therapeutic intervention

She was given both internal medications (Table 1) and external therapies (Table 2). Immobilization of the shoulder and bandaging were done. During treatment the patient was advised to avoid excess intake of spicy and oily food, to take adequate rest and to include fruits like oranges, pomegranates and green leafy vegetables like spinach, moringa leaf, punarnava leaf (*Boerhaviadiffusa*) and green gram soup in the diet.

Discussion

The treatment helped relieve pain, weakness and restricted movements (Table 3). There was a gradual improvement in muscle wasting of the left upper arm. The follow-up X-ray took showed that the subluxation of the shoulder was reduced (Figure 2). Recovery of subacromial - subdeltoid bursitis depends on age, aetiology & underlying joint disorder. It may take a few weeks to some months to recover completely. Ayurveda can offer better relief in cases which doesn't respond to modern conservative management & may avert surgery.



Figure2- X-ray at discharge

Table3–Muscular examinations

	Before treatment	After treatment
Range of movement		
Flexion	Immovable and tender	Movable without tenderness
Extension	Immovable and tender	Movable with slight tenderness
Abduction	Immovable and tender	Movable with slight tenderness
Adduction	Immovable and tender	Movable without tenderness
Medial rotation	Immovable and tender	Movable with slight tenderness
Lateral rotation	Immovable and tender	Movable with slight tenderness
Circumduction	Immovable and tender	Movable with slight tenderness
Muscle wasting	Present	Absent
Resting pain	+++++	+
Muscle weakness	+++++	+

Table1-Oral medicines

Medicine	Dosage	Anupana	Time	Duration
Nisakathakadikshayam	200ml	Lukewarm water	Frequently	23/9/22-2/12/22
				23/9/22-06/10/22
				13/10/22-28/10/22
Pramehoushadhi	5gm	Lukewarm water	Twice a day after food	5/11/22-19/11/22
				26/11/22-2/12/22
Gandharvahasthadikashayam	90ml	Lukewarm water	Twice a day before food	23/9/22-08/10/22
T. Dhanwantharam	2 tablets	Lukewarm water	Twice a day before food	23/9/22-08/10/22
				17/11/22-2/12/22
				24/9/22-15/10/22
Punarnavadithoyam	200ml	Lukewarm water	Frequently	26/10/22-18/11/22
Thrombexcapsule	2 tablet	Lukewarm water	Thrice a day, after food	25/09/22-5/10/22
				09/10/22-25/10/22
Maharasnadikashayam	90ml	Lukewarm water	Twice a day, before food	17/11/22-2/12/22
T.Kaishoraguggulu	1 tablet	MaharasnadiKashaya	Twice a day before food	09/10/22-25/10/22
Dhanadanayanadikashayam	60ml	Lukewarm water	Bedtime	2/11/22-16/11/22
T.Yogarajaguggulu	1 tablet	Lukewarm water	Twice a day, after food	2/11/22-16/11/22
T.Sudarsanam	1 tablet	Lukewarm water	Night, after food	15/11/22-28/11/22
Gandharvaerandaitailam	15ml	Hot water	Early morning	3/12/22

Table2: External therapies

Treatment	Medicine	Duration
Pichu	Murivenna	23/09/22-29/09/22
Sthanikaabhyanga	Murivenna	30/09/22- 04/10/22
Choornapindaswedam (snigdham)	Kolakulathaadichoorna with murivenna	24/09/22-28/09/22
Upanahaswedam	Nagaradichoornam Dhanyamla Sathahwaaditailam	24/09/22-26/09/22
Choornapindaswedam	Kolakulathaadichoorna with dhanyamla	29/09/22-05/10/22
	Nagaraadichoornam Punarnavadikashayam	29/09/22-05/10/22
Lepam	Grihadhoomadi	29/09/22-30/09/22
		26/11/22 -27/11/22
Thalam	Ksheerabala101avarthiRasnadichoornam	29/09/22-05/10/22
Nasyam	Anutailam -1 drop in eachnostril	29/09/22-05/10/22
Bandage	Murivenna	12/10/22-18/10/22
Dhara	Dhanyamla	29/10/22-07/11/22
		26/11/22-27/11/22
Upanaha	Jadamayadichoornam Dhanyamla Saindhava Karpasasthyaditailam	03/11/22
Jambeerapindaswedam	JambeeramKarpasasthyaditailam	5/11/22-11/11/22
PathraPotaliSwedam	Vataharapatrasandmurivenna	13/11/22-19/11/22
EkangaDhara	MurivennaSahacharaditailam	5days 21/11/22 -25/11/22
Swedam	Arkapatra	5days 28/11/22- 2/12/22

As per *Ayurveda*, the *hetu* (i.e. aetiological factor) is Covid vaccination-induced trauma. This resulted in subsequent vitiation of *Vata* and *Pitta* at the site of the shoulder joint. Vitiating *Vata* & *Pitta* (the *Sampraptighatakas*) got *Sthansanshraya* (settled) in the shoulder joint particularly at the bursa. This resulted in *Ugra ruja* (pain), *Sparsaasahatwam* (intolerance to touch), restriction of joint movement (*Asakthiinprasaaraakunchanaadi karmas*) *Swayadhu* (swelling due to accumulation of fluid), *Daha* (burning pain) and *Sthambha* (stiffness). The shoulder joint weakness progressed to subluxation due to the laxity of the ligaments and muscles.

Drugs used for internal medications and external therapies were *vatanulomaka*, *sophahara* and *Balya* in nature. Therapies which are *Brimhana* (nourishing and muscle strengthening)^{4,5} were applied later on to combat weakness of the left shoulder joint muscles caused due to *Vatakshaya*. After the reduction of pain and inflammation, *Santarpana* and *Kevalavata hara* line of treatments were adopted to regain the strength of *Mamsadhathu* and to cure the aggravated *Vata dosha*.

Pichu with Murivenna gives analgesic and anti-inflammatory effects. *Upanaha* is both *Sneha* and *Sweda* in nature and also possess anti-inflammatory action. *Vatanulomaka* and muscle strengthening effect was contributed by *Abhyanga*, *Pathrapotali sweda* and *Thaila dhara*. *Dhara* also results in vasodilatation. *Pratimarsha nasya* with *Anutaila* has *Tridoshanashana*, *Balya*, *Brimhana* and *Rasayana* properties which may help to increase circulation and reinforcement of joints.⁶ *Bandage (Bandhana)* provided immobilization and joint stability.

Kaisoraguggulu and *Sudarsanam tablet* aid in the anti-inflammatory action and analgesic action thus increasing the mobility of the shoulder joint.⁷ *Dhanwantharam gutika* acts as an Effective *Vatashamaka* drug. Also, it improves digestion and circulation. *Yogarajaguggulu* and *Gandharvahasthadi Kashaya* is *Vatanulomana* and *Agni deepaka* in action. While considering *Punarnavadi kashaya*, the majority of drugs found to have *Kashaya Katu Tikta rasa*, *Laghu Rooksha guna*, *Ushna*, *veerya* and *Katuvipaka*. Remaining drugs found to have *Madhura Amla rasa*, *Snigdha guna*, *Seetaveerya* and *Madhura vipaka* and can be considered as *Tridoshasamana*. The drug *Punarnava* is found to be *ShodhaSoola hara*, *Amahara* and *Vrishya*. Researchers have proven that *Punarnava* is anti-inflammatory, diuretic, expectorant and immunomodulatory.⁸ *Maharasnadi Kashaya* is used for a variety of purposes such as reduction of pain, reduction of inflammation, and antipyretic activity.⁹ *Gandharveranda* is anti-inflammatory, laxative and mild analgesic in action. So in this condition, it helps to reduce pain and swelling in the shoulder joint. Moreover, it has a wide range of action in all *Vata*-related disorders.

Conclusion

Shoulder injury related to vaccine administration (SIRVA), is an avoidable sequelae of vaccine placement. Although the far majority of shoulder discomfort from shoulder vaccinations is temporary and self-limited, there remains a risk for potential injury or irritation of shoulder structures from errant injections and/or tissue response to the delivered vaccine. SIRVA after Covid vaccination can be well managed with Ayurvedic treatment principles. This study emphasizes the importance of an integrative approach in healthcare. Study on a large number of samples to draw more concrete conclusions may be appreciated.

References

1. Batra S, Page B. Shoulder injury related to vaccine administration: case series of an emerging occupational health concern. *Workplace Health Saf.* 2021;69(2):68–72. doi 10.1177/2165079920952765.
2. Walker-Bone K, Palmer KT, Reading I, Coggon D, Cooper C. Prevalence and impact of musculoskeletal disorders of the upper limb in the general population. *Arthritis Rheum.* 2004;51(4):642–651. doi 10.1002/art.20535.
3. Priyavrat Sharma Acharya Susrutha, Susrutha Samhitha, Nidana sthana. *Chaukhambhavisvabharathi*. Varanasi. Vol.2: Bhagna nidanam.15/9;2013. p.100
4. Srikantha Murthy KR. Acharya Vagbhata, Ashtanga Sangraha, Sutra Sthan. *Chaukhambha Orientalia*. 2nd ed. Varanasi: Dvididhopakramaneeya Adhyaya, 22/2-4; 1998. p. 421-3.
5. Sharma Bhagwan Dash KR, Sharma RK. Acharya Agnivesha, Charaka Samhita, Sutra Sthan. *Chaukhambha Sanskrit Series office*. 13th ed. Varanasi: Langhanabhrumhaneeya Adhyaya, 22/10; 2002. p. 388-9.
6. Sharma Bhagwan Dash KR, Sharma RK. Acharya Agnivesha, Charaka Samhita, Sutra Sthan. *Chaukhambha Sanskrit Series office*. 13th ed. Varanasi:Matrasitheeyadhyaya
7. P Himasagara Chandra Murthy, Sarngadhara Samhitha ,vata Kalpana. *Chokambha Sanskrit series office*; Varanasi. Reprinted 2013. P187
8. Pooja Verma A, LaLV.K.Punarnava-A Natural Remedy by Ayurveda. *Int J Pharm Pharm Sci*, 2014; Vol 6, Issue 8, 1-6.
9. Patel Snehal S., Shah Praboth V. Evaluation of anti-inflammatory potential of the multidrug herbo mineral formulation in male Wistar rats against rheumatoid arthritis. *J Ayurveda Integr Med.* 2013 Apr-Jun;4(2):86–93. [PMC free article] [PubMed] [Google Scholar]

§§§