Journal of Ayurveda and Integrative Medicine 14 (2023) 100560

Contents lists available at ScienceDirect

Journal of Ayurveda and Integrative Medicine

journal homepage: http://elsevier.com/locate/jaim

Case Report

"An integrative approach with Ayurveda and Traditional Chinese Acupuncture in post covid parosmia – A case study"

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ARTICLE INFO

Article history:
Received 26 June 2021
Received in revised form
10 August 2021
Accepted 15 February 2022
Available online 16 July 2022

Keywords:
Ayurveda
Traditional Chinese acupuncture
Integrative approach
Parosmia

ABSTRACT

This case is about a post viral olfactory dysfunction due to SARS-CoV-2 infection, since six months treated effectively by a unique integrative approach with Ayurveda and Traditional Chinese Acupuncture (TCA). It started as a sudden onset of anosmia in the month of August 2020 with fever history two weeks prior. After three months Parosmia commenced which gradually worsened. A month later she experienced dysgeusia and nausea leading to tremendous stress and sleep disturbances. Ayurveda treatment included *Shadbindu taila marsha nasya* for seven days followed by *Shadbindu taila pratimarsha nasya* (intra nasal oil instillation) for a period of four months. *Naradiya laxmivilasa rasa* orally for one month. GV.20, LI.20, Ex.1, H.7, LI.11, GB.8, GB.21 and GV.25 Points were selected for TCA. The Indian Smell identification test score on day one of treatment was zero, day seven was four, at the end of one month was eight and after four months it was ten. Parosmia was assessed by VAS which was ten on day one and zero on day seven. We could achieve complete normalcy in olfactory function within four months of this treatment. This integrative approach was found to be safe and effective in treating Post covid parosmia.

1. Introduction

This case reports a post viral olfactory dysfunction (PVOD) due to SARS-CoV-2 infection, since six months treated effectively by a unique integrative approach with *Ayurveda* and TCA. Post covid parosmia is not a minor issue since it causes serious problems with eating and mental well-being [1]. In an international study of people with recent smell loss, seven percentage of more than 4000 respondents reported experiencing parosmia [2]. But in a recent survey study of six month follow up, of a cohort of 434 subjects; almost half had parosmia [3]. A systematic review showed that there is no strong evidence for different pharmacologic agents in treating post viral olfactory dysfunction [4]. *Ayurveda* considers olfactory function being executed by *Vatadosha* [5] and *Parthiva-dravya* [6] (*Kaphadosha*) and hence olfactory dysfunction is due to vitiated *vata* and *kapha dosha*. In this case we included *Marsha nasya* and *Pratimarshanasya* (intra nasal oil instillation) with *Shadbindu* taila [7] and oral intake of *Naradiya laxmivilasa rasa* [8]. Clinical studies showed that TCA was effective in PVOD [9,10]. We report this case as the integrative approach resulted in rapid improvement of parosmia and quality of life.

2. Case presentation

We present a case of 20 years old female complaining of change in the perception of smell since six months. It commenced as a sudden onset of anosmia in the month of August 2020 with a fever history which had appeared two weeks prior. She underwent treatment for five days with oral antibiotics and nasal drops of which the details are not known. But there was no change in her anosmia. After three months she started perceiving foul smell while eating which gradually worsened. She had to avoid all her favorite foods and drinks due to the mal odor. A month later she started experiencing impaired sense of taste along with nausea while eating. This resulted in tremendous stress leading to sleep disturbances and she opted for *Ayurveda* Treatment. She was

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Peer review under responsibility of Transdisciplinary University, Bangalore.

https://doi.org/10.1016/j.jaim.2022.100560

advised to undergo test for Covid IgG Antibodies and was found to be reactive that confirms the diagnosis of post Covid parosmia.

3. Clinical findings

Anterior Rhinoscopy was normal except for Type I DNS towards left. There was no history of any head injury, epilepsy, upper respiratory tract infections, chronic sinusitis and any medications. The patient had no other complaints pertaining to the nervous system except olfactory dysfunction or other symptoms in the post-covid period.

4. Diagnostic assessments

Olfactory function was assessed based on Indian Smell identification test (ISIT). ISIT score for anosmia scoring was zero [11]. Parosmia was evaluated based on quantitative and qualitative measures where in it showed severe alteration in quantitative aspect and VAS Score of ten in qualitative aspect [12]. The quantitative aspect was assessed with a scale of normal, mild alteration, moderate alteration and severe alteration.

4.1. Laboratory investigations

Hb-9.7 gm/dl, TC- 4.4 × 10^3/μL, Nuetrophils-47%, lymphocytes-41%, eosinophils-6%, monocytes- 6%, Basophils- 0%, Platelet count-311 × 10^3/μL, RBC- 4.44 million/cumm, ANTI-SARS-COV-2(IgG)-2.23 Reactive.

5. Therapeutic intervention

Ayurveda treatment given is depicted in Table 1. We selected GV.20, LI.20, Ex.1, H.7, LI.11, GB.8, GB.21 and GV.25 points for TCA. The therapeutic intervention of these points is depicted in Table 2. The schematic representation of the same given in Fig. 1

7. Discussion

The integrative approach was effective in improving the anosmia (ISIT score from zero to ten) after four months of treatment and in relieving parosmia completely within a week. There are evidences that hypothesize the pharmaco-dynamic effects of *Marsha nasya/Pratimarsha nasya* via olfactory bulb and neuro-epithelia, making them primary treatment modalities in parosmia [14]. *Shadbindu taila* was selected in treating this case as it pacifies vitiated *Vata* and *Kapha dosha* which causes parosmia. A study of skin irritation potential on rabbit skin showed that *Shadbindu taila* did not produce any adverse events and safe to use in humans [15]. *Naradiya laxmivilasa rasa* reduces vitiated *Vatakapha dosha* and it is indicated in nasal disorders as well.

Table 1
Treatment administered in this case.

Treatment	Dose	Anupana	Time	Duration
Nasya with *Shadbindu taila* done by the therapist. (Ingredients of *Shadbindu taila* is depicted in Table 2)	Eight *Bindu* (4 ml) instilled into each nostrils	–	Morning hours	Seven days
Acupuncture done by the physician	–	–	Afternoon	20 min duration for seven days
Naradiya laxmivilasa rasa tablet (Ingredients are depicted in Table 3)	One tablet (250 mg)	Lukewarm water	Thrice daily after food	One month
Pratimarsha nasya with *Shadbindu taila* done by the patient during follow up period.	Two *Bindu* (1 ml) instilled into each nostrils	–	Thrice daily	Day eight to the end of four months

Depicting the treatment administered in this case.

Traditional theory of acupuncture including *Yin and Yang* theory and *Yuan* source points stimulate the vital energy of the regular meridians, regulates the functional activities of the internal organs, reinforces the antipathogenic factors and eliminates the pathogenic factors. The aim of acupuncture is to restore physical balance and to bring yin and yang into equilibrium. The

Table 2
Therapeutic intervention of TCA points [13].

S.no	TCA Point Selected	Indication	Anatomical location	Needling angle
	GV.20	Powerful sedative point Nasal obstruction.	At the vertex of the head in a depression in the midline of the cranium on the line which joins the tip of one ear to the other. The point is 7 cun above the posterior hairline, and 5 cun above the anterior hairline	Slanting posteriorly 0.3–0.5 cun
	LI.20	For all nasal disorders	In the nasolabial grove, at the level of the midpoint of ala nasi	Perpendicular or oblique insertion 0.3–0.5 cun.
	Ex. 1	Rhinorrhea, Insomnia	At the forehead, in the midpoint between the two medial end of the eyebrows	Subcutaneous 0.3–0.5 cun horizontally downwards.
	LI.11	All chronic infectious disorders Antibiotic point or best Immunity improving point.	When the elbow is flexed, the point is found in the depression at the lateral end of the transverse cubital crease	Perpendicular or oblique downward insertion 0.8–1.5 cun.
	H.7	Anxiety, Insomnia, Psychosomatic disorders	On the radial side of the tendon of the flexor carpi ulnaris, on the transverse crease of the wrist. Posteriolateral to pisiform bone.	Perpendicular insertion 0.3–0.5 cun
	GB.8	Depressive Psychosis, vertigo, Ear diseases	Directly above the apex of the ear, 1.5 cun above the hairline.	Subcutaneous 0.5–0.8 cun
	GB.21	Endocrine point	Midway between the tip of acromion and C7 spinous process, at the highest point of the shoulder	Perpendicular 0.5–0.8 cun
	GV.25	Nasal obstruction, Rhinorrhea	On the region of the face, on the tip of the nose.	Straight 0.2–0.3 cun

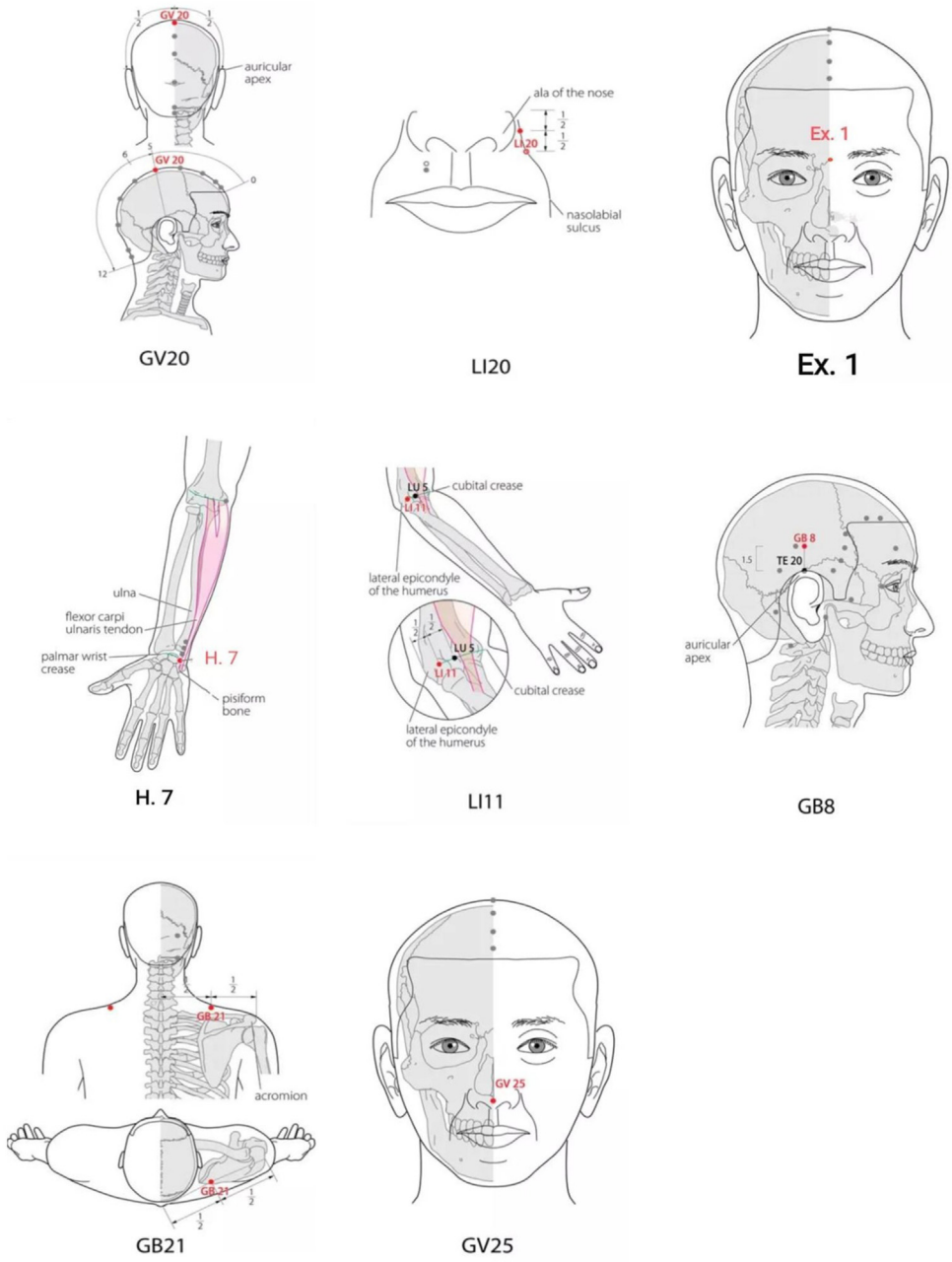

Fig. 1. Showing Pictorial depiction of 8 TCA points.

Table 3
Ingredients of *Shadbindu taila* [7].

S·NO	INGREDIENTS	LATIN NAME	QUANTITY
	Tila Taila	*Sesamum indicum DC.*	768 ml
	Aja Dugdha	Goats milk	3.072lts
	Bhringaraja	*Eclipta alba Linn*	3.072lts
	Eranda	Ricinus Comunis *Linn*	19 gms
	Tagara	*Valeriana wallichii DC.*	19 gms
	Shatahva	*Anethum sowa Kurz.*	19 gms
	Rasna	*Pluchea lanceolata C·B.Clarke*	19 gms
	Jeevanthi	Leptadinia retriculata *(Retz.) Wt.etArn*	19 gms
	Saindhava	Rock salt	19 gms
	Bringa	Cinnamomom zeylanicum *Blume.*	19 gms
	Vidanga	*Embelia ribes Durm.f.*	19 gms
	Yashti	Gylcerrhiza glabra *Linn.*	19 gms
	Vishwaoushadha	Zingiber officinalis *Rosc.Ex.Smith*	19 gms

Manufacturer: Ayukalp, Gujrat, India.

effectiveness of certain specific acupuncture points such as distal points and confluent points can be explained based on the Thalamic neuron theory [16]. The Thalamic Neuron Theory postulates that the central nervous system is involved in all disease processes, it maintains homeostasis for the entire body by sending commands to the periphery. Pathologically habituated states can be reversed by dehabituation through manipulation or rectification of the abnormal neural circuits by physical means (physical neuromodulation) like acupuncture [17]. In this case pathologically habituated state refers to altered smell perception which can be dehabituated and restore the normal smell perception with the help of acupuncture.

In general, principles used in selection of TCA points are a) all acupuncture points treat the disease of the pathway of channel and their pertaining organs. b) Acupuncture points have an effect

Table 4
Ingredients of Naradiya Lakshmi vilasa rasa [8].

S·NO	INGREDIENTS	LATIN NAME	QUANTITY
	Abhraka Bhasma	Purified and processed mica	10 gms
	Shuddha Parada	Herbal purified mercury	10 gms
	Shuddha Gandhaka	Herbal purified Sulphur	10 gms
	Karpoora	Cinnamon camphora *Nees &Eberm.*	10 gms
	Jatiphala	*Myristica fragrans Henlt.*	10 gms
	Jatikosha	*Myristica fragrans Henlt.*	10 gms
	Vriddhadaru	Argyrea speciosa *Sweet.*	10 gms
	Dhattura	*Datura metel Linn*	10 gms
	Bhanga	*Cannabis sativa Linn*	10 gms
	Vidari	*Pueraria tuberosa DC.*	10 gms
	Shatavari	Asperagus racemosus *Willd.*	10 gms
	Nagabala	*Grewia populifolia Vahl.*	10 gms
	Atibala	*Abutilon indicum Linn.*	10 gms
	Gokshura	*Tribulus terrestris Linn*	10 gms
	Nichula	Stryxnus nuxvomica *Linn*	10 gms
	Nagavalli	Piper betel *Linn.*	10 gms

Manufacturer: Dhootpapeshwar, Maharashtra, India.
Treatment outcome and follow up

on the surrounding area of its location therefore useful for treating diseases of surrounding area [18]. Based on these principles eight TCA points were selected for treating this patient. The TCA points GV.20, LI.20, Ex.1, LI.11, GV.25 were selected due to their indication in nasal disorders. H.7 was selected since its mainly indicated in anxiety and sleep disturbance [13]. Acupressure on GB.21 TCA point is believed to reduce anxiety level which in turn helps in creating calmness and balance throughout the body and mind [19]. GB.8 was selected based on the effect of acupuncture point on the surrounding area of its location [13]. Since Ayurveda and Traditional Chinese Medicine (TCM) have common philosophical back ground [20] and TCA is a non-pharmacological intervention, we could infer that there will be no side effects by this unique integrative approach. There was considerable improvement in her quality of life in terms of sleep, food intake and psychological stress.

Table 5
Treatment outcome is portrayed in Table 5.

S.no	Test	Symptom	Before treatment	On day 7 of treatment	After one month	After 4 months
1	ISIT	Anosmia	0	4	8	10
2	VAS	Parosmia	10	0	0	0
3	Severity analysis	Parosmia	Severe alterations	Normal	Normal	Normal

Showing the treatment outcomes in individual Symptom.

8. Conclusion

Post covid parosmia can hamper the quality of life in many ways and should be treated effectively by all means for a faster recovery. In this case, integrative approach of Ayurveda and TCA cured parosmia within a week and anosmia in four months and was found safe as well. Taking leads from this case, it would be tested on larger samples in the near future and later incorporate into clinical guidelines for integrative management of post covid parosmia.

Source of funding

None.

Conflict of interest

The authors have no conflict of interest to declare.

Credit author statement

Akshatha K Bhat: Conceptualization, Methodology, Validation, Writing original draft. **Krishna Kumar:** Conceptualization, Resources, Writing – Review & editing. **Jim Daniel Johnson:** Conceptualization, Resources, Writing – Review & editing.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jaim.2022.100560.

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