

The effectiveness of Ayurvedic oil based nasal instillation (Nasya) medicines in the treatment of facial paralysis (Ardita)

A thesis submitted by

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Declaration

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Abstract

Background

Ardita (facial paralysis) is a medical condition that disfigures or distorts the facial appearance of the sufferer, causing facial asymmetry and malfunction. Ardita patients may benefit from considering alternative treatments such as Ayurveda, including Taila Nasya (nasal instillation of medicated oil).

Objectives

To synthesize the best available evidence regarding the effectiveness of different Nasya oils in the treatment of Ardita. Secondly, to draw evidence based recommendations from the synthesis for practitioners and Ardita sufferers.

Inclusion criteria

Types of participants

Studies conducted with adult sufferers (18-70 years of age) of Ardita (chronic or acute) in any setting were considered. Studies including participants who were pregnant or suffered allergic rhinitis, fever, intracranial tumour/haemorrhage and bilateral facial palsy were excluded.

Intervention(s)/comparator(s)

Taila Nasya (at all dosages and frequencies), either as a standalone treatment or in combination with other Ayurvedic treatments, was the intervention considered. Comparators considered were different Taila Nasya stand-alone treatments, Taila Nasya in combination with other Ayurvedic interventions and Ayurvedic interventions that did not include Taila Nasya.

Outcomes and measures

The outcomes of interest were changes in Ardita symptoms including facial distortion, speech disorders and facial pain. All measures of these symptoms were considered. .

Types of studies

All quantitative study designs (experimental, quasi-experimental and observational) were considered.

Search strategy

A three-step search strategy was initially used to identify published and unpublished studies. Studies published in the English language were considered, irrespective of publication date. Following an initial limited search of MEDLINE and CINAHL, the text words contained in the title and abstract, and of the index terms used to describe each articles were analysed. From the identified keywords and index terms, searches were undertaken across all relevant databases. Thirdly, reference lists of identified thesis and articles were searched for additional studies. Universities and website operators related to Ayurvedic research in India were contacted, including the National Institute of Ayurveda for relevant studies. Besides this, the University of Adelaide librarian was contacted to retrieve those studies identified in the reference lists of thesis and articles. Due to the dearth of studies identified, a

fourth step was added to the search strategy commonly used for systematic reviews based on the Joanna Briggs Institute systematic review methodology. This involved contacting Indian universities and relevant institutions to locate and obtain studies that match the inclusion criteria of this review.

Methodological quality

Studies matching the inclusion criteria were independently assessed by the author and a secondary reviewer using the relevant standardised critical appraisal instrument from the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (MAStARI).

Data extraction and synthesis

Data was extracted by the primary reviewer using a standardised data extraction tool from the Joanna Briggs Institute. The intention was to conduct a meta-analysis. However, this was not possible because only two studies were identified, and these examined different interventions and comparators. A narrative synthesis was therefore conducted, aided by tables.

Results

Only two pseudo-randomised studies, with a small number of participants and which met the inclusion criteria, were accessible and included in the review. One study with 20 participants, divided equally into two groups, compared the effectiveness of two alternative nasal instillations, namely Anu Taila and Mashadi Taila for alleviating four Ardita symptoms. Although the researchers claimed that Anu Taila Nasya is better than Mashadi taila Nasya for controlling facial distortion, they stated that Mashadi taila Nasya offered statistically highly significant outcome values. Furthermore, they made an unsupported statement that Mashadi taila Nasya if administered with Shamana medicines will give better results in short duration. The second study, which included 30 participants split evenly between the intervention and comparator groups, compared the effectiveness of Nasya with Shirobasti for alleviating seven Ardita symptoms. Both studies used observational measurements and graded Ardita symptoms as 'mild', 'moderate' or 'marked' at baseline and after one month. In the study that included 30 participants, the 15 patients who received the Nasya intervention experienced relief from the symptoms of facial pain, speech disorder and earache within the range of 78.2% to 90.9%, graded as 'marked'. The review found scant and low level of evidence favouring the Taila Nasya intervention compared to Shirobasti.

Conclusions

This systematic review presents extremely limited evidence, from only two small experimental studies, that administration of Nasya oil alone may provide some relief from Ardita symptoms of facial distortion, speech disorder, inability to shut eyelids and dribbling of saliva in adult patients. Of the two studies, one had very weak methodology and did not offer any robust results. No strong conclusions may be drawn from the evidence included in this review due to the limited number of studies, limited number of participants and poor quality of studies.

Inferences for practice

Practitioners should advise Ardita patients that there is extremely limited evidence that suggests that

Mahamasha Taila Nasya alone may provide some relief from Ardita symptoms of facial distortion, speech disorder, inability to shut eyelids/upward eye rolling, and dribbling of saliva in adult patients. Given the absence of a strong evidence base, practitioners should be guided by clinical wisdom and patient preference.

Inferences for research

Well controlled clinical trials comparing the effects of standalone Nasya therapy and Nasya combined with other Ayurvedic treatments and/or conventional medicine on Ardita symptoms should be conducted. High quality clinical trials examining the relative effectiveness of different Nasya oils for treating Ardita are also required.

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Definition of Ayurvedic terms

General

Amla – Sour.

Churna - Dry ground herbs (fine powder form). According to the requirement, Churnas are administered either orally, nasal (snorting) or externally (topical application).

Dosha - The basic psycho-physiological functional principle of an individual.

Kashaya – Astringent taste. The word Kashaya is sometimes used as a synonym for Kwatha

Katu – Pungent.

Kerala Panchakarma - An Ayurvedic purification procedure that originates from the state of Kerala in India known as Kerala Panchakarma. It is distinct from the general Panchakarma. Kerala Panchakarma includes Shirobasti, Dhara (controlled continuous flow of liquid medicine in the body), Pizhicil (dripping medicinal oil on the body by wringing a cloth soaked with the oil), Pinda Sweda (application of a bolus of medicines by fomenting the patient with the medicines tied in a piece of cloth and warmed in oil), Netra Basti also known as Tarpanam (an eye treatment where the eyes are bathed in herbal juices or medicinal oil using a donut-like container made with flour), Karnapurana (medicinal eardrop instillation), and Shirolepa (medicinal poultice application on the body. Navara Kizhi (bio-stimulation of whole or part of the body using a bolus bundle of cooked Shastika rice) is a sub class of Pinda Sweda.

Kwatha - A herbal decoction (Also called 'Quatha', 'Kashayam', 'Kwatham' or 'Kwath'.). This is generally prepared by refluxing (controlled boiling) a required quantity of prescribed herbs in water in the ratio 1:8 until the contents reduce to a quarter of the original quantity.

Lavana – Salty.

Madhura – Sweet.

Marsha Nasya - When medicated oil is used for Nasya, there is dose wise differentiation. When a higher dose of oil is used for Nasya, the term Marsha Nasya is used. The higher dose is meant for quick action. When a lower dose of oil is used, the term Pratimarsha Nasya is used.

Nasya - Nasal instillation of Ayurvedic medicine (Also called 'Nasyam'.). It is one of the five panchakarma procedures used as part of Ayurvedic treatment.

Panchakarma - The five prong modality of purification treatment employed as a part of Ayurvedic treatment. The word Panchakarma is a combination of two words, Pancha and Karma. Pancha means five and Karma means procedure. This includes Vasti (enema, administered with medicinal liquid), Nasya, Raktamoksha (bloodletting), Vamana (emesis) and Virechana (purgation).

Poorvakarma - Preparatory procedures employed prior to administering Panchakarma.

Prakriti - The primordial psycho-physiological quality of an individual that is present at birth.

Raktamoksha – Bloodletting. This is one of the Panchakarma procedures used in treating

hematoma, blood clots or in a detoxification regimen.

Rasa – Taste.

Shirobasti - One of the five modalities of treatment that is used in Ayurveda where about 1 litre of medicated oil is held within a tight circular container on the patient's head. The oil is retained for an average period of one hour and subsequently removed.

Taila - Medicated oil. Taila is generally prepared in two stages. Firstly, a kwatha is made by refluxing (controlled boiling) of prescribed herbs in water. Secondly, the liquid decoction thus obtained is heated with a required amount of vegetable oil or animal fat (usually butter oil). The aqueous part is evaporated leaving behind a mixture of oil and solid mass, which is then filtered to obtain Taila. In some Taila preparations, herbal juices are preferred over kwatha.

Taila Nasya - Nasal instillation of oil based medicine.

Tikta – Bitter.

Vamana - Emesis or controlled induced vomiting with prescribed medicines. This is one of the Panchakarma procedures for treating general Kapha disorders.

Vasti - One of the Panchakarma procedures, also known as Basti. This is generally medicated enema with a Kwatha, Taila or practitioner prescribed liquid. Most often Vasti is prescribed for treating Vata disorders.

Virechana - One of the Panchakarma procedures where medicines are used to induce controlled purgation.

Symptoms

Akshinimesha asamarthyā and Netravikriti - Inability to shut eyelids or upward rolling of eyes.

Ardita – Facial paralysis.

Karna vedana – Earache.

Lalasarva - Dribbling of saliva.

Lalata vali nasha - Absence of facial wrinkles.

Mukhaparshwa greevavedana - Facial pain.

Vaksanga - Speech disorder.

Vaktrardhavakra and Mukha vakrata - Facial distortion.

Shamak - Easing vitiation.

Balya - That which strengthens the body.

Brimhaniya – Nutritious.

Acronyms

AYUSH - The Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy of the Government of India.

CINAHL - Cumulative Index to Nursing and Allied Health Literature.

DARE - The Database of Abstracts of Reviews of Effects.

DHARA - Digital Helpline for Ayurveda Research Articles.

EBM - Evidence Based Medicine.

EMBASE - Excerpta Medica Database.

HTA - Health Technology Assessment.

IPD - In patient department (of a hospital).

JBI - Joanna Briggs Institute.

JBISIRIR - JBI Database of Systematic Reviews and Implementation Reports.

MEDLINE - Medical Literature Analysis and Retrieval System Online.

OPD - Outpatient department (of a hospital).

PICO - The mnemonic for Population, Intervention, Comparison intervention and Outcomes.

PRISMA - Preferred Reporting Items for Systematic Review and Meta-Analyses.

RCT - Randomised controlled trials.

TRIP – Turning Research into Practice.