



ORIGINAL RESEARCH PAPER

Ayurveda

EFFECT OF AYURVEDIC MANAGEMENT FOR PATIENTS SUFFERING FROM OTALGIA OF VARIED AETIOLOGIES

KEY WORDS: Otaglia, Karnapoorana, Nirgundi taila, Triphala guggulu

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ABSTRACT

Ear pain is one of the most common complaints encountered in general practice.

Aims: The study was designed to assess the effect of *Nirgundi taila* and *Triphala guggulu* in Otaglia of varied common aetiologies.

Settings and Design: A prospective, open label, observational study was conducted at *Shalaky OPD*.

Methods and Material: Total 50 cases of Otaglia due to Inflammation, Ear wax etc were selected randomly.

Statistical analysis used: The paired Student's t-test was used to identify significant differences between before and after treatment values expressed as the means \pm SD.

Results: Of 50 patients, excellent to good response in relief of Otaglia was noted in 84%. The relief provided by the therapy was highly significant ($P < 0.01$). Most of the patients (98%) accepted the remedy well.

Conclusions: Present study highlights combination of this treatment given better relief in patients with Otaglia of short duration.

Introduction:

Ear pain (Otaglia) is one of the most common complaints encountered in general practice. It may be caused by a disease of the ear or may be nonotogenic in origin. Various diseases can cause Otaglia, because the ear has rich sensory innervations through many cranial nerves (V, VII, IX, and X) and cervical (2 and 3) nerves¹. Otitis can be classified as primary or referred. Primary otaglia (Otogenic otaglia) is ear pain that originates inside the ear; whereas referred otaglia is ear pain that originates from outside the ear². In modern practice it is treated with systemic as well as local Analgesics, Antibiotics and Anti-inflammatory drugs. Long term use of these medicines may result into unpleasant or intolerable side effects. The herbal formulations are safe and effective as it is derived from natural ingredients, found to be giving long lasting relief. In present study *Ayurvedic* herbal preparations which acts on different pathological aspects of Earache i.e. *Nirgundi taila* for *Karnapoorana* and *Triphala guggulu* (for internal) were used for trial.

Aims and Objectives:

1. To assess the effect of *Nirgundi taila* and *Triphala guggulu* in Otaglia.
2. To find effective therapy to avoid recurrence and complications.

Materials and Methods:

Design: Open label, prospective and observational

Subjects: Male/Female in the age between 15 - 60 years

Sample Size: 50 patients

Recruitment: Patients were selected randomly with earache, irrespective of their age, religion, sex, occupation etc.

Inclusion and Exclusion Criteria for Study Subjects:

Inclusion Criteria:

1. The patients having Earache due to Ear wax, Inflammation, Furunculosis and Otomycosis
2. Irrespective of Sex, Religion were selected for the study
3. Patients aged >15 yrs and <60 years.

Exclusion Criteria:

1. Recently ear operated patients
2. Congenital anomalies of ear
3. Patients aged <15 yrs and >60 years
4. Pain due to malignant origin, pain due to referred cause i.e. carious teeth, etc.,
5. Patient whose heart, liver or kidney function is seriously abnormal was excluded.

Study Procedures and Outcomes Measures:

A total of 50 cases were randomly selected and treated for otaglia between March, 2016 and April, 2017. Detailed clinical history and consent was taken in the clinical research proforma based on

Ayurvedic and Modern parameters. Pre-medical records and physical examination data were reviewed. Regarding the *karnapurana* procedure, Patient was made to lie down in lateral position with effected side up; procedure was explained and ears were cleaned. Preheated lukewarm *Nirgundi taila* was administered till end of auditory anal in the affected ear and slight massage was done on post auricular region. Let the patient stay in the lateral position until pain reduced. Then the ear was cleaned with cotton. Wax or Fungus was removed from the ear (who had) after it became soft. This procedure was repeated daily until pain subsided fully (maximum 7 days). Patients were advised to take *Triphala guggulu* 1 tablet td with water as an *anupana* (Vehicle) for one month. Patient was advised to avoid *vata vardhaka ahara* (*Vata* aggravating food) like potato, chick pies etc, *guru anna* (heavy to digest), cold items and preserved items etc.

The Earache severity, frequency and duration of attack were recorded at screening, on the next day, on third day and on the fifth day of treatment. Routine Laboratory investigations (RBS, ESR, TC, DC) and local examination (Otoscopy) were done before and after the study. Assessment was done based on improvement in symptoms, acceptability and overall efficacy and safety were also studied with the help of following grades. Total improvement was categorized as follows: No improvement 0 - 25%, mild improvement $> 25\% - 50\%$, moderate improvement $> 50\% - 75\%$, Marked Improvement $> 75\% < 100\%$ and Complete Remission 100%. The acceptability was also studied. The paired Student's t-test was used to identify significant differences between before and after treatment values expressed as the means \pm SD.

Observations and Results:

In this series of 50 patients of Earache maximum number of the patients (50%) was from the age group of 36- 45 years followed by 20% patients belonging to 26-35 years, 18% belongs to 46-55 years and minimum i.e. 12 % belongs to 15 -25 years age groups. Other data shows maximum 74% patients were of males and remaining 26% were females, maximum of 70% patients were Hindus, 88% married, 48% came from middle class society and 70% were taking mixed diet. 84% of the patients' complaint of mild pain while 12% of them had moderate pain and 4% had severe pain. 76% of patients had acute onset of pain followed by 24% of them having gradual onset.

Table 1 – Cause of Pain

S.No	Cause of Pain	Number of patients	Percentage
1.	Ear pain due to wax	32	63%
2.	Ear pain due to furunculosis	6	12%
3.	Ear pain due to otomycosis	8	17%
4.	Ear pain due to Inflammation	4	8%

Of 50 patients, 63% were diagnosed with ear pain due to wax, 17% were having ear pain due to otomycosis, 12% were having ear pain due to furunculosis and remaining 8% were having ear pain due to Inflammation.

Table 2 – Characteristic of Pain

S.No	Charecteristic	Day	mean±SD	p value
1.	Pain severity	1 st day	8.34±1.18	<.001
		3 rd day	6.72±0.94	<.001
		5 th day	2.9±1.03	<.001
2.	Discomfort/Block	1 st day	8.42±1.18	<.001
		3 rd day	7.14±1.34	<.001
		5 th day	3.12±0.87	<.001

This combined therapy is effective in reducing the severity, frequency and duration of the pain and the effect is maintained during the follow up period also.

Table 3 – Improvement of Pain after treatment

S. no	Cause of otalgia	Pati ents	C.R %	Ma.I %	Mo. I %	Mi.I %	
1.	Ear pain due to wax	32	2	6.25	78.1	3	9.37
2.	Ear pain due to furunculosis	6	1	16.6	66.6	0	0
3.	Ear pain due to otomycosis	8	1	12.5	75	1	12.5
4.	Ear pain due to Inflammation	4	2	50	25	0	0

Note - C.R - Complete remission, Ma.I- Marked improvement, Mo.I-Moderate improvement,

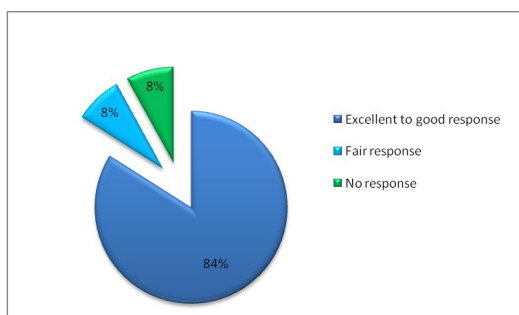
Mi.I- Mild improvement

Substantial improvement, i.e., excellent to good response, in relief of Earache was noted in 42 (84%) out of 50 patients and fair response in another 4 (8%). Only 4 out of 50 patients who had longer duration are did not respond adequately to treatment. Most of the patients (98%) accepted the remedy well. The overall effect of the drug on pain reduction was observed in 13 patients (26%) on first day, 28 patients (56%) after third day and 9 patients (18%) after fifth day. Treatment has provided statistically highly significant result.

Table 4 – overall result

S.NO	Result	No. Patients	Percentage
1.	Excellent to good response	42	84%
2.	Fair response	4	8%
3.	No response	4	8%

Figure 2 – overall result



Discussion:

Otalgia occurs due to Otitis externa, Foreign Body, Furunculosis, Cerumen, Trauma etc.³. Swimming, high humidity, and localized trauma may predispose to otitis externa. Movement of the auricle increases markedly the pain of acute otitis externa, furunculosis, and perichondritis⁴. Foreign bodies, eczema, and fungal infections of the EAC also cause pain^{5,6}. Referred otalgia is associated with the nerve affected i.e, the auriculotemporal nerve (V), posterior

auricular nerve (VII) etc. *Susrutha's* Description of *Karnasula* (Pain in the ear) addresses the pathophysiological aspects described by modern medicine. *Avasyayya* (expose to fog), *Jalakreeda* (Swimming), *Karnakandu* (Itching in the ear) and other *vataprakopaka causes*, *Midyayogena sastrasya* (Improper usage of instruments) are mentioned as causative factor for ear diseases. Due to this causes vitiation of *Vata Dosha* takes place and it leads to the pain in the ear. The results in present study can be attributed to the different ingredients which act on the different pathological aspects. This *Nirgundi taila* contains main ingredient as *Nirgundi (Vitexnegundo Linn.)*, which acts on the different aspects of Pathophysiology involved in Earache⁷. *Nirgundi* have *Katu, Tikta rasa, Laghu, Ruksha guna, Ushna veerya*. It pacifies *Vata* and *Kapha* and it has anti-inflammatory, antispasmodic, analgesic and anti arthritic activity^{8,9}. *Tilaitaila (Sesamum indicum,)* has *Snehana* (oleation), *Sandhaniya* (adding agent) and *Shoola prashmana* (Pain reliever)¹⁰. Actions of *Tilaitaila* is due to its principal chemical constituents like natural lipids, glycolipids and phospholipids, 85% olielic and linoelic acid, Myristic, palmitic, stearic acid etc in traces. *Karnapoorana* is a kind of *bahyasneha* procedure. *Snehana* mainly acts against *vata* and because of look worm oil it mainly acts against *sheettaguna* and *Rukshaguna*. *Triphala guggulu*¹¹ contains *Amalaki (Embelica officinalis)*, *Hareetaki (Terminalia chebula retz.)*, *Vibeetaki (Terminalia bellerica roxb.)*, *Pippali (Piper longum)* and *Guggulu (Commiphora mukul)*. *Amalaki* fruit is laxative, carminative, antihemorrhagic and antianaemic etc¹⁷. *Hareetaki* fruit is astringent, purgative, tonic, antispasmodic, *Vibeetaki* fruit is astringent, anti-inflammatory, anti-diarrhoeal, tonic, anticephalgic, attenuant, *Pippali* fruit is sweetish, pungent, hot, aphrodisiac, laxative, emmenagogue, abortifacient, diuretic and tonic and *Guggulu* resin is bitter, anti-inflammatory, antiseptic, rejuvenating and general tonic etc¹². *Triphala guggulu* and *Nirgundi taila* were works with anti inflammatory, analgesic effect. With regards to above mentioned multi factorial action of *Nirgundi taila* and *Triphala guggulu*, it can be used for Earache and gives long lasting relief from different kinds of Earaches.

Conclusion:

Present study highlights combination of *Nirgundi taila karnapoorana* and *Triphala guggulu* give better relief in patients with Otalgia of short duration. However, assessment of long-term management to avoid recurrence can be tested.

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