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Management of Adenoid Hypertrophy - A Case Report

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Abstract: ***Adenoids, or the pharyngeal tonsil, are lymphoid tissues located in the roof and posterior wall of the nasopharynx. They form an integral part of Waldeyer's ring and play a critical role in immunological defense during early childhood. The common etiological factors are recurrent upper respiratory tract infections, allergic rhinitis, and exposure to environmental irritants. It typically manifests in children between 3 and 7 years, leading to nasal obstruction, mouth breathing, snoring, hyponasal speech, and recurrent otitis media with effusion due to Eustachian tube dysfunction. Diagnosis is primarily clinical, supplemented by nasal endoscopy and lateral radiographs of the nasopharynx. Untreated cases may result in craniofacial deformities ("adenoid facies") and impaired quality of life. Management ranges from medical therapy (antibiotics, nasal corticosteroids, allergen control) to surgical removal (adenoidectomy), particularly when there is airway compromise, otitis media with effusion, or recurrent sinusitis. Modern techniques include curettage, endoscopic-assisted adenoidectomy, and powered instrumentation, all of which aim to minimize recurrence and complications. The limitations of conventional medical treatments and the general apprehension towards surgical interventions underscore the need for innovative, non-invasive alternatives to address this health issue. Pursuing this objective, this case report discusses a 7–year–old male child diagnosed with adenoid, presenting with difficulty in breathing through the nose, recurrent rhinitis, mouth breathing, snoring while sleeping, sleep disturbances, and recurrent ear infections with intermittent ear pain. Internal medications include Vyoshadi Guggulu, Vyoshadi Vatakam, Haridrakhandam, Aragwadarishtam, Dasamoola Katuthrayam Kwatham, and treatment procedures like Gandusham, Pratimarsa Nasya, and Siroabhyanga. The intervention yielded positive results, with the patient and their family expressing considerable satisfaction regarding the treatment's outcome.***

Keywords: Adenoids, Ayurveda, *Gandusham, Pratimarsha Nasya, Siroabhyangam*

1. Introduction

Respiratory illnesses represent one of the leading reasons for pediatric consultations, and among them, chronic nasal obstruction is the most frequently encountered condition.[1] The primary cause of this obstruction is adenoid hypertrophy, which not only interferes with normal breathing but also contributes to problems involving the auditory and craniofacial systems, as well as sleep-related disorders such as snoring and obstructive sleep apnea.[2,3] These complications can eventually result in educational difficulties and social challenges in children.

The adenoid itself is a solitary mass of lymphoid tissue situated at the back of the nasal cavity in the nasopharynx, connecting the nose to the throat. Similar to the palatine tonsils, it plays a defensive role by filtering bacteria and viruses and producing antibodies, thereby serving as one of the body's "first lines of defense" against infection.[4,5] In early childhood, when upper respiratory infections are most common, the adenoid typically enlarges as part of its normal function. With age, however, it gradually shrinks and usually regresses by the time of puberty.[6]

When adenoids become excessively enlarged, a condition known as adenoid hypertrophy, airflow through the nasal passages may be completely blocked. Even if the obstruction is partial, the increased effort required to breathe through the nose often forces the child to adopt mouth breathing. In some cases, the enlarged adenoid alters the resonance of the voice by impeding nasal airflow without causing total blockage. Long-standing hypertrophy can also give rise to the characteristic appearance known as "adenoid facies." This includes features such as persistent mouth breathing, an elongated face, prominent upper incisors, an underdeveloped maxilla, a short upper lip, elevated nostrils, and a high-arched palate. The 19th-century author George Catlin, in his book *Breath of Life* (1861), humorously illustrated these facial features and emphasized the importance of nasal breathing. [7,8]

Infections involving the adenoids may lead to a wide range of complications, including recurrent otitis media, glue ear, sinusitis, and lower respiratory tract infections. The standard surgical intervention for problematic enlargement or infection is adenoidectomy, which involves the complete or partial removal of the adenoid tissue. Typical symptoms that may prompt surgery include persistent nasal obstruction and excessive mucus production. However, regrowth of adenoid tissue is reported in up to 20% of cases after surgery. The procedure is generally carried out under general anesthesia through the oral cavity, with techniques such as curettage, cauterization, or laser ablation. Post-operative issues may include pain, vomiting, swallowing difficulties, and bleeding.

In Ayurveda, adenoid hypertrophy is correlated with *Kanthashaluka* because of the similarity in its clinical manifestations. *Kanthashaluka* is recognized as one of the seventeen throat disorders mentioned in Ayurvedic literature and is known to significantly affect the quality of life of patients. Treatment mentioned by Acharya Vagbhata includes *Swedana* (sudation therapy) followed by *Lekhana* (scraping therapy), *Pratisarana* (topical application), *Gandusha* (medicated gargling), and *Nasya* (Nasal instillation). Acharya

Susruta advises surgery similar to *Tundikeri* or *Galasundika* if not relieved by *Raktamokshana* (Bloodletting).

Aim and Objectives

To evaluate the effect of Ayurvedic medication in the management of Adenoid hypertrophy by a single case study.

2. Material and Method of the Study

Place of Study: Shalakyatantra (OPD), Govt.Ayurveda College Hospital, Thiruvananthapuram

Study Design: A single case study of Adenoid hypertrophy.

Duration of study: The duration of treatment was 3 weeks.

3. Methodology – Case Presentation

A 7-year-old male child was brought by his parents with complaints of nasal obstruction for the past 3 years, which has gradually worsened over the last 6 months. The obstruction is bilateral and persistent, more marked at night, and is associated with mouth breathing. Parents report that the child has developed the habit of keeping his mouth open most of the time. There is a history of snoring and noisy breathing during sleep for the past 8 months, along with restless sleep. The parents also complain of irritability and decreased concentration in school. The child has recurrent nasal discharge that is mucoid in nature and frequent episodes of sore throat and cough. There is also a history of recurrent ear infections with intermittent ear pain. Grade IV adenoid hypertrophy was confirmed on nasal endoscopy and lateral nasopharyngeal X-ray, showing near total choanal obstruction by a modern physician, and advised surgery for the same.

Examination of Patient

Table 1: Examination findings of the patient

Category	Findings
General Examination	Moderately built and nourished child, mouth breathing with open-mouth posture, adenoid facies (elongated face, dull expression, crowded upper incisors, high-arched palate, short upper lip), no pallor, cyanosis, or clubbing, vitals stable
Nose	External nose normal; anterior rhinoscopy – nasal cavity clear, but posterior choana not visualized; nasal obstruction suspected; hyponasal speech present
Throat (Oropharynx)	Tonsils not enlarged; high-arched palate present; no post-nasal drip visible; rest of oropharynx normal
Ear	External auditory canal is clear bilaterally; Tympanic membrane is retracted on both sides.
Special ENT Examination	Nasal endoscopy – Grade IV adenoid hypertrophy causing near total choanal obstruction; X-ray nasopharynx (lateral view) – soft tissue shadow completely blocking nasopharyngeal airway;
Systemic Examination	Respiratory system – bilateral air entry, no added sounds; Cardiovascular & CNS – within normal limits

Internal Medications

Table 2: Internal medications given

S. No	Medicine	Dosage
1	*Vyoshadi Guggulu*	1-0-1, after food
2	*Vyoshadi Vatakam*	1 tsp tds
3	*Dasamoola Katutrayam Kashaya Sookshma Choornam*	1 tsp in 1 glass of hot water, twice daily, before food
4	*Haridrakhandam*	1 tsp tds
5	*Aragwadarishtam*	15 ml, bd, after food

Treatment Procedures

Table 3: Treatment procedures done

S. No	Procedure	Medicine	Dose
1	*Gandusham*	*Traikatu Churnam + Arimedadi Thailam*	5-gram powder boiled in 2 glasses of water and mixed with 10 ml *thaila,* twice daily
2	*Pratimarsha Nasya*	Normal saline nasal drops	2^{o}-2^{o}-2^{o}
3.	*Siroabhyanga*	*Thekaraja Thailam*	Quantity sufficient for external application over the scalp

4. Results

After treatment, the child showed marked symptomatic relief. Nasal obstruction was considerably reduced, and mouth breathing was less frequent, though not completely absent. Snoring during sleep decreased in intensity, and the child was able to sleep more comfortably with fewer episodes of restlessness. Parents reported an improvement in daytime alertness and concentration at school. Recurrent nasal discharge and episodes of ear pain were reduced. On examination, tympanic membrane appears to be intact. Follow-up nasal endoscopy revealed that the adenoid mass had regressed, showing a reduction in size to approximately 60% of the nasopharyngeal airway, indicating significant but not complete resolution of obstruction. The characteristic adenoid facies features persisted, although the open-mouth posture was less prominent.

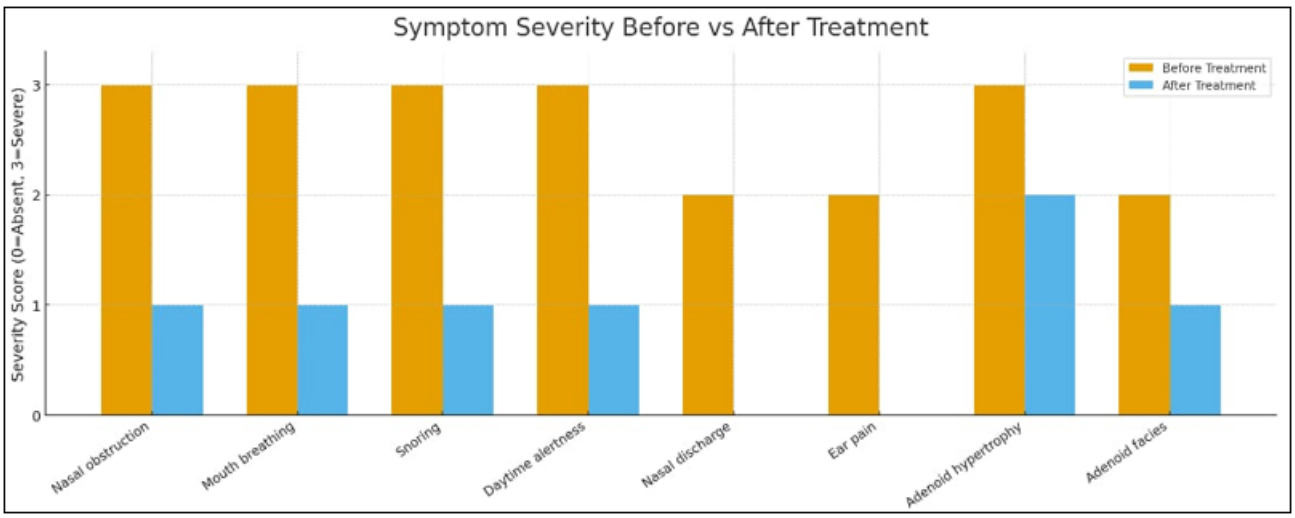
To represent this graphically, qualitative findings are converted into measurable/semi-quantitative scores, and the symptoms were graded as:

- 0 = Absent

- 1 = Mild
- 2 = Moderate
- 3 = Severe

Table 4: Assessment of findings before treatment and after treatment

Symptom / Finding	Before Treatment	After Treatment
Nasal obstruction	3 (Severe)	1 (Mild, occasionally present)
Mouth breathing	3 (Severe)	1 (Mild, less frequent)
Snoring	3 (Severe)	1 (Mild, reduced intensity)
Daytime alertness	3 (Poor)	1 (Improved)
Nasal discharge	2 (Moderate, recurrent)	0 (Absent/minimal)
Ear pain	2 (Occasional)	0 (Absent)
Tympanic membrane retraction	2 (Retracted both sides)	0 (Intact)
Adenoid hypertrophy (Endoscopy)	3 (Grade IV, nearly total obstruction)	2 (60% airway obstruction, partial regression)
Adenoid facies	2 (Present)	1 (Less prominent)



Graph 1: Graphical representation of the assessment of findings before treatment and after treatment

5. Discussion

In Ayurveda, the enlarged adenoid is correlated with *Kanthashaluka,* which is described in *Kanthagata Rogas* (Diseases of the throat) by Acharya Susruta and Vagbhata. *Dosha* involvement is mainly *kapha pradana tridosha* by Acharya Vagbhata and only *Kapha Dosha* by Acharya Susruta. Both Acharyas included this disease under *Sadhya Rogas* (Curable diseases), in which Acharya Susruta included it exclusively under *Sastra Sadhya Roga.*[9,10] The line of treatment mainly focuses on *Kaphaharatwam. Vyoshadi guggulu,* containing *Trikatu, Musta, Triphala,* and *Vidanga,* is very effective in *Medo-Sleshma-Vataja Rogas.* These ingredients helps to reduce *Kapha dosha* accumulation in the nasopharyngeal region, which corresponds to the mucosal congestion and hypertrophy of the adenoid, and having *Sroto-shodhana* (channel cleansing) property thereby clears blocked nasal passages, improves airflow, and prevents stagnation of secretions, *Shothahara* (anti-inflammatory) property reduces local swelling and edema in the nasopharynx and the *Krimighna & Rasayana* property provides antimicrobial action and enhances immunity, thereby reducing recurrent infections of the upper respiratory tract. *Trikatu,* which is present in the *Vyoshadi Vatakam,* has a mucolytic & decongestant action. So it improves ciliary activity, thins mucus, and clears nasal blockage, which is especially useful in children with mouth breathing and nasal obstruction. *Dasamoola,* present in *Dasamoolakatuthrayam Kashaya Sookshma Choorna*, is well-known for reducing *shotha* (swelling/edema), which correlates with the inflamed, hypertrophied adenoids. *Haridra* in *Haridra Khandam* shows an anti-inflammatory effect. Curcumin in turmeric has well-documented anti-inflammatory and anti-edematous properties, reducing lymphoid tissue swelling in the nasopharynx. *Aragwadarishtam* helps in adenoids by reducing inflammation (*Shothahara*), preventing recurrent infections (*Krimighna*), clearing mucus (*Kapha-hara*), and modulating immunity, thereby gradually decreasing the size and symptoms of hypertrophied adenoids.

Gandusham with *Trikatu Jalam* works through its *Kapha-hara, Shothahara, Krimighna,* and *Rasayana* properties. It reduces local inflammation, clears mucus, prevents infection, and improves throat immunity, thereby providing symptomatic relief in adenoid hypertrophy. *Arimedadi Taila* reduces adenoid hypertrophy by its *Kapha* pacifying property, *Shothahara, Krimighna* properties, and by anti-inflammatory, antimicrobial, and immunomodulatory effects in modern pharmacology. Normal saline nasal drops provide symptomatic relief by clearing secretions, reducing nasal blockage, preventing infections, and improving nasal breathing. *Tekaraja Thailam,* being *Snigdha (unctuous), Ushna (warm), and Kapha-Vata Shamaka*, balances aggravated doshas. Since adenoid enlargement is primarily a *Kapha-pradhana disorder* with *Vata* association, *Siroabhyanga (head massage*) reduces these imbalances.

6. Conclusion

Adenoid hypertrophy is a common condition in children, often leading to nasal obstruction, recurrent infections, snoring, and disturbances in overall growth and quality of life. While modern medicine recommends surgical intervention adenoidectomy, Ayurveda offers a holistic, non-invasive approach aimed at reducing symptoms, preventing recurrence, and improving immunity. Various Ayurvedic formulations like *Vyoshadi Guggulu, Vyoshadi Vatakam, Dashamoola Katutrayam Kashaya, Haridrakhanda, Aragwadarishtam,* and local measures such as *Trikatu-Arimedadi Thaila* gargling, saline nasal drops, and head massage with medicated oils act through their *Kapha-Shamaka, Shothahara, Krimighna, and Rasayana* properties. These therapies help in reducing local inflammation, clearing mucus, preventing infections, and strengthening the upper respiratory tract. Therefore, Ayurvedic management of adenoids offers an effective complementary approach by addressing the root cause, *Kapha Dosha,* providing symptomatic relief, modulating immunity, and promoting overall health, thereby reducing the need for surgical intervention in many cases. This outcome, however, is a single case. Hence, studies incorporating larger sample sizes are needed to scientifically validate the findings and implement them in clinical practice.

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